DOCUMENT RESUME

ED 024 993 CG 003 376

By-Barclay, James R.

Changing the Behavior of School Psychologists: A Training Rationale and Method.

California State Coll., Hayward.

Spons Agency-Office of Education (DHEW), Washington, D.C.

Pub Date 3 Oct 68

Grant-OEG-4-7-120003-1952; OEG-9-8-070098-0026

Note-299p.

EDRS Price MF-$1.25 HC-$15.05

Descriptors-Behavior Change, *Communication Skills, *Educational Research, *Institutes (Training Programs), Learning Theories, Methods Research, *School Psychologists, *Training Techniques

This report is concerned with the re-training of 30 existing school psychologists. It is based on the need for more effective school psychology practice, the emergence of a new social learning approach to school problems, and the development of television techniques for immediate learning. The study utilized an experimental design wherein randomized groups of applicants were compared to test the efficacy of new methods in effecting behavioral change. A number of traditional and new predictors and criteria of behavioral change were developed. Further, both control and experimental subjects were followed up in their setting. The conclusions of the study demonstrate strongly the efficacy of such a program in re-training existing manpower pools for more efficient consultation behavior. (Author/NS)

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CHANGING THE BEHAVIOR OF SCHOOL PSYCHOLOGISTS:

A TRAINING RATIONALE AND METHOD

ED024993

CG 003 376

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October 3, 1968

FOREWORD

This report is the final report for a 1967 NDEA Institute in Advanced Counseling for School Psychologists at California State College, Hayward, Grant No. OEG 4-7-120003-1952. It is also the final report for a small educational research Grant No. OEG 9-8-070098-0026.

ED024963

ACKNOWLEDGEMENTS

The planning, execution, and analysis of the NDEA Institute for School Psychologists at California State College, Hayward during the summer of 1967 would have been impossible without the cooperation of many individuals. The writer gratefully acknowledges the help and assistance of Dr. William Cash, Jr., and Dr. Richard Riordan, formerly of the United States Office of Education, Department of Health, Education and Welfare, who supported this effort in innovative training. Dr. Dwight L. Goodwin, San Jose State College, Dr. Calvin Catterall, Santa Clara Unified Schools, and Dr. William Garvey, San Jose State College, staff members, provided indispensable help in the planning, and execution of this effort. A host of graduate assistants also provided much help in the institute. Of particular help was Stephen Goodman, administrative assistant in the institute, Rebecca Lawrence, Timothy Roorda, Rodger Marion, Everal Wilde, and Gregory Papedo. The research design and implementation of the statistical procedures were developed by the writer, Dr. Dwight L. Goodwin and Dr. Richard Snow of the Stanford Research and Development Center. Robert Proctor helped in the computer programming and implementation.

The support for this study was obtained from an NDEA Advanced Counseling Institute #OEG 4-7-120003-1952 and from a Small Educational Research Grant #OEG 9-8-070098-0026. This support is gratefully acknowledged. The assistance of the Research Foundation of California State College, Hayward through the advice and counsel of Mr. Chester George was most helpful in the financial aspect of this Institute.

Finally, as is known by all those who do and write up research, wives and secretaries are indispensable allies. Mrs. Lisa K. Barclay provided

some ideas relating to the institute and contributed through her support and patience. Mrs. Joanna Jorgensen, secretary to the director, answered innumerable questions, typed up hundreds and thousands of pages of material, and fulfilled a job which ordinarily could not be done by two full-time people.

In summary, I am indebted to all these people and to colleagues and students at California State College, Hayward who supported this effort by their patience and understanding.

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CHAPTER I

INTRODUCTION AND OVERVIEW OF THE STUDY

Statement of the Problem

This report is concerned with the research outcomes of an NDEA sponsored institute for school psychologists and a small educational research grant obtained for analysis of the data.[1] The institute was held at California State College at Hayward during the summer of 1967. The preparation and the analysis of the data covered the period from January 3, 1967 until June 1, 1968. This was the first NDEA supported institute designed exclusively for school psychologists and had as its general goal the development of more adequate communication skills in school psychologists. A secondary goal was focused on the effort to provide a methodological model for the evaluation of the behavioral outcomes of short-term intensive training program.

Nature of the Institute Program

The unique features of this institute centered on the research design and particularly the follow-up procedures. The institute itself was considered a gross independent variable with changes in the cognitive organization and behavioral skills of the school psychologist participants the dependent variables. Thus, the institute attempted not only to present a new model of school psychology practice based on a social learning theory approach and behavioral analysis method, but to assess as rigorously as possible the behavioral outcomes of such a training program.

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[1] Research reported here was supported by OEG 4-7-120002-1952 and OEG 9-8-070098-0026.

Some of the specific questions which were asked in relationship to this training program were:

1. Is it possible to assess and measure theoretical orientations towards diagnosis and treatment in school psychology?
2. Do differential theoretical orientations result in differential approaches to school psychology practice as demonstrated by psychologist behaviors?
3. Is it possible in a short-term institute to effect change not only in cognitive dimensions, but in measurable behavioral dimensions of school psychology practice?
4. What is the effect of an immediate feed-back training system such as television in the changing of cognitive concepts as well as behavioral practice?
5. What is the holding power of such intensive training techniques in terms of school psychology practice after the institute has completed its work?
6. What combination of predictors can be best used in screening applicants for such a training program when a combination of behavioral and non-behavioral criteria are used as the basis of regression equations?

The answers to some of these specific questions were deemed most important in providing actual experimental data both regarding the efficacy of a new role model for school psychologists, and the development of a methodology appropriate for evaluating such an effort.

Abstract of Method and Design

From 112 completed applications by individuals who met the criteria of: 1) completion of minimum graduate training in school psychology (i. e. master's degree and/or state certification or credentialing as a school psychologist) and 2) *de facto* performance of school psychological services, a random assignment based on geographical stratification of the total number of applicants was made to four classifications: 1) participant status, 2) control status, 3) alternate status, and 4) other status. Thirty school psychologists from throughout the nation were invited to attend the institute.

The overall design included the collection of a number of paper-pencil test variables and demographic-educational information on all applicants as a part of the application procedure, certain selective testing and behavioral analysis on participants at the beginning, end and several months after the conclusion of the institute and the inclusion to varying extent of similar experiences for an active and passive control group drawn from the original applicants in random fashion.

The independent variables of the institute program consisted of the didactic instruction, the television experience, group critiquing, and the micro-consultation procedure. Television was used both as a means of obtaining basal rates of psychologist interview behaviors and as a criterion of change. Subsequent to the institute a follow-up was initiated in which members of the staff traveled to the home community of the 30 enrollees and 16 controls. Though post institute measures were obtained once again on test variables, the primary focus of the follow-up was to obtain behavioral data referring to interviewing and assessment skills. The audio tapes collected in the follow-up procedures together with pre and post- institute television tapes were then analyzed by graduate students trained in a behavioral analysis technique.

Statistical analyses included the obtaining of means and standard deviations on 129 test and behavioral variables, correlations between variables, analyses of variance and covariance on pre, post and field testing, several factor analyses of applicants and participants, and the obtaining of regression equations on selected criteria.

Need for the Study

The need for research in the area of school psychology and the evaluation of short-term intensive training programs is patent. Though there has been considerable discussion regarding new alternate models for school psychology practice (see any issue of Psychology in the Schools (1960-68), (Bower, 1964, Bardon and Bennett, 1967), there has been no real "hard data" findings regarding a new alternate approach to school psychology. This research effort had as one of its prime purposes the development of a new social learning model for school psychology practice and the field testing of such a model. It is believed and hoped that the evidence generated in this Institute may be helpful in influencing both school psychology training programs and the public school administration of such programs, for in both of these areas historical accidents and functional traditions rather than research evidence have tended to circumscribe the role of the school psychologist.

The second major goal of this study was to develop a more rigorous methodology for evaluating the effects of short-term institute training. This question is most important and really addresses itself to the methodology of measuring change which occurs as a consequence of learning. Many millions of dollars have been spent in the support of NDEA Institutes for teachers and counselors. For the most part these institutes have not been able to meet rigorous experimental conditions (such as the assignment of enrollees from a pool of applicants on a randomized basis). There have been inadequate provisions for controls or other alternate groups by which comparisons could be made. Within the field of counseling itself, the criteria of instructional progress have been notably vague, reflecting in part, the inability of counselor educators to specify the terminal behaviors or learnings which their institute was designed to meet.

In fairness to these programs it should also be pointed out that where "enhancement of self-concept" or "development of inter-personal skills" may be the criteria of progress or terminal wished-for outcomes, it is extremely difficult to obtain behavioral data relating to these criteria. As a result, there has been a reliance on rating scales, self-evaluation techniques, Q sorts and other predominantly subjective instruments to measure the effect of institute programs.

This research effort then has attempted to provide some behavioral data relating to a new social learning model for school psychology practice while at the same time designing a new methodology for the measurement of intensive short-term training.

Organization of the Research Presentation

The extent of research engaged in for this project is such that it is necessary to specify the attack which will be taken in presenting the cumulative findings of the study.

Chapter 1. Introduction and Overview of the Study

Chapter 2. History and Rationale of Models of School Psychology Practice

Chapter 3. A Social Learning Model of School Psychology Practice

Chapter 4. Instrumentation and Design of the Study

Chapter 5. Characteristics and Correlational Relationships of Applicants and Participants

Chapter 6. Pre-test, Post-test and Field Comparisons

Chapter 7. Factor Analyses and Regression Equations for Applicants and Participants

Chapter 8. Summary and Conclusions

Each chapter will be subdivided into sections dealing with various portions of the instrumentation or data obtained. In this manner it is hoped a unified presentation will result from the step-by-step analysis of specific instruments or levels of testing.

Terms and Explanatory Clarifications

The research study which is to follow involves the use of a number of terms with specific meanings. In order to clarify some of these terms and to specify their nature as used in this study, they are clarified and explained in the following pages.

1. Counseling

The writer will use the concept counseling as a generic term to designate any systematic effort to modify the behavior of another individual. Subsumed under this definition are both individual and group counseling procedures plus consultation. Though counseling has been defined in many ways in the past, this definition obviates the need for defining whether counseling is concerned with "normal" individuals or encompasses also "abnormal" individuals. Such a distinction is considered irrelevant, as is the past concern regarding levels of psychotherapy such as reconstructive versus insightful and supportive psychotherapy. In the specific context of this research study, counseling refers to whatever methods and techniques have been used as a process in order to effect change in individuals.

2. Process and Methods of Behavior Change

By process or methods is meant the specific ordering of techniques utilized by a counseling approach to realize the goals specified in the mind of the school psychologist. Though it is seldom alluded to in the literature, there are but three major ways in which individuals can be changed. The first of these methods is to bring to bear some kind of psychological pressure upon the client, student, teacher, etc., in order to effect a course of conduct, the development of insight, or some other goal. This may take the approach of non-directive counseling, confrontation, clarification, explanation, teaching, support, simple cajoling, and selective reinforcement procedures. In every instance the counselor is utilizing his own behavioral and cognitive repertory to bring to bear the effect of his personality and communication system on the corresponding intellective or affective system of the counselee. The second approach is to alter the environment which supports the client's undesirable behavior or to provide those environmental changes which will promote the emergence of new skills. In this approach changes in the environment may include working with teachers in a specific approach, talking to parents, or a variety of combination of specific and non-specific techniques and strategies all of which are designed to help the client reduce behaviors which are maladaptive or to elicit new behaviors. The third approach is obviously a combination of the other two.

3. Assessment

Central to methods and processes is a consideration of the ways and means whereby methods and processes are determined. Obviously, this is a decision-making procedure based on information from various sources. Two major functions take place in this decision-making procedure. One is assessment and the other is strategy-making. Formerly, these two procedures were grouped under three which were derived from the medical model in psychotherapy. Diagnosis, prognosis, and treatment were the older terms. Assessment is a term which covers both the diagnosis and prognosis phases of assessment. Assessment as well as diagnosis and prognosis are simply terms to cover the method of arriving at a judgment about the problems of another individual. In the older medical terminology, diagnosis was used to represent the procedures whereby a clinician arrived at a judgment regarding the causes of a specific symptom or set of symptoms. Thus a pain in the stomach might be caused by a variety of mal-functions including heart, liver, stomach or some combination of the three or other unknown causes. Certain clinical symptoms were associated with these specific ailments. Through the use of observation, physical examination, clinical laboratory tests, etc., plus the knowledge of pathology which the physician has, he arrives at several hypotheses relating symptoms and clinical findings to causal etiology. Obviously, this includes a host of procedures and methods specific to medicine, neurology, and anatomy. However, the good diagnostician should be able to narrow the hypothesis field to one or two specific hypotheses which he can test out by differential courses of treatment to determine whether his judgment was correct. The focus of diagnosis was, however, concerned with the establishment of the specific causal factors relating to the presentation of symptoms.

In the past this model has been most actively used in clinical psychology. As a consequence, the clinical psychologist, though using other methods such as observation, etc., has tended to search almost exclusively for causal sources of problematic behavior. Maladaptive behavior in the schools such as acting out, aggression, inability to attend etc., has been causally related to earlier patterns of nurturing, inadequately conceptualized (from a behavioral point of view) intervening variables such as ego or superego, and many other interactive combinations. Much of this has been inferred from testing results.

The futility of such an exercise in seeking out the causal strands of behavior based on operant modes of behaving is high-lighted by Kuo (1967) where he indicates that at least five sets of independent and 23 interactive factors must be taken into consideration to determine an adequate theory of behavioral causality i. e. 1) morphological factors, 2) biochemical and biophysical factors, 3) stimulating objects, 4) developmental history, and 5) environmental context. "Every response of the animal is the functional product of the combined effects of the interwoven reactions of these five factoral groups through inputs and feedback and their organic trace effects."

Therefore, assessment in this study refers to the collection of information relating specifically to WHAT, WHERE, WHEN, AND HOW OFTEN rather than to WHY. Assessment covers the systematic and unsystematic utilization of observation and/or testing to arrive at a basal rate of responding. The assessment is made within the framework of actual observed behaviors and is arbitrarily restricted by the utilization of Occam's Razor or the principle of parsimony (Entia non sunt multiplicanda). Inferred mental or emotional states not based on observation and behavioral demonstration are considered epistemologically less than factual information.

Assessment then focuses on obtaining as clear and objective a picture of the individual in his cultural setting as can be gained with the tools and techniques which are available to us. This includes not only the use of observation, interviewing, and test results, but also the development of basal rates of behavior observation in terms of the frequency, duration, extent and intensity of specific behaviors. In view of the complexity of obtaining assessment data, it is even more hazardous to form predictions of what future behavior will be like in a prognosis sense. However, in view of habit formation, and the tenacity with which individual behavior is learned and responses habituated, one can make a possible prognosis of future methods of responding assuming that environmental contingencies are not substantially altered. Prognosis or prediction is specifically considered more relevant and reliable when it relates to specific behaviors such as social skills, motor skills, cognitive skills and approach to task-oriented behaviors. It is more relevant since true prediction cannot really be based on global constructs such as self-concept, but must be defined in terms of specific skills and frequencies of behavior. If, for example, a child is manifesting specific disruptive behaviors in a classroom, an examination of the antecedents of this behavior, the consequents to the behavior and the obtaining of a basal rate of responding may be helpful in making a prediction about continuing behavior without changes in the environmental contingencies. Assessment therefore includes the obtaining of relevant information related to the specific antecedents of the problem behavior(s), the consequent responses by others and by the individual, and the contingencies, or arrangement of sequential support systems in the environment.

4. Strategy-Making

Strategy-Making in this research report follows after assessment. Traditionally, the medical model procedures of diagnosis and prognosis were followed by a course of treatment. It is here in this phase of psychological analysis that the profession has been extremely weak. As will be seen in subsequent chapters of this study, global nomenclature in diagnosis terminology has its counterpart in global nomenclature for treatment.

Catterall (1967) in the Santa Clara Unified School District of California has devised a series of charts referring to an array of possible prescriptive interventions or treatments. These interventions broadly fall into four major categories which are: 1) environmental interventions, 2) installed interventions, 3) assigned interventions, and 4) transactional interventions. Environmental interventions refer to possible changes in program management, structuring or placement changes. Assigned interventions refer to behavioral exercises such as physical, developmental social or cognitive exercises with emphasis on the experimental development of new role models. Here game theory, sociodrama, etc. are relevant procedures. Installed interventions include a variety of specific learning techniques utilized to develop appropriate respondent and operant behavior in the individual. Finally, Transactional interventions refer chiefly to a group of counseling experiences. By strategy-making in this study is meant then, those specific treatment contingencies determined upon as a consequence of the assessment procedures.

5. Criterion and Criterion Approximation

A criterion is a rule or standard of behavior. It is recognized that criterion determination is a major problem in the use of tests as predictors of behavior, (Barclay, 1968). Suffice it to say here that the notion of criterion as used in this study refers not only to subjective self-report criteria, grades obtained on tests given, but also paper-pencil test instruments and behavioral data obtained from actual observations both personal, video-taped, and audio-taped.

There can be both individual criteria of behavior which are characteristic and functionally related to the subjective epistemological and ontological systems of the individual, and objective criteria as determined through the cultural transmission by the agencies of peers and superiors. Despite the relevance and pervasive influence of subjective criteria, all human beings are judged to some extent with a cultural context wherein their behavior is appraised as it matches certain socially derived criteria of what constitutes effective human behavior.

Much of the weakness of past research into the effects of training institutes such as this one has been related to the traditional weakness of criterion determination. Where counseling as a process is related to criteria of self-enhancement, functional autonomy, etc., criterion determination becomes extremely difficult. Even as a child's behavior in a given classroom is the function of a complex set of responses shaped continually by home and school influences, and specifically in the school setting by the behavioral expectancies of peers and teachers, so likewise school psychologist behavior is a more complex set of behaviors shaped by literally millions of input behaviors and consequent individual responses which have been habituated. Criteria of what constitutes effective human behavior is a contextual matter and dependent on assessment of criterion sources.

6. Environmental "Press"

Environmental "press" is used in this study to describe the complex source of most criterion variance. It is the complex of agents and methods utilized in the environment to shape behavior of the individual towards a specific behavioral objective determined both individually and collectively by the power sources within the individual's environment.

7. Behavior Modification

This is the specific nomenclature used to describe the assessment, strategy-making, criterion-determination system described in the preceding pages. It is based on social learning theory which includes a bridge between cultural anthropology, experimental psychology, and social psychology. It is a planned sequential process for effecting behavior change in individuals or groups through the systematic utilization of learning principles and their application.

8. School Psychologist

By school psychologist in this study is meant an individual in the school setting who "uses his specialized knowledge of assessment, learning, and interpersonal relationships to assist school personnel to enrich the experience and growth of all children and to recognize and deal with exceptional children", (Cutts, 1955, 174). This is the definition given by the Thayer conference. Specifically, within the context of this study a school psychologist is an individual engaging in school psychology practice: 1) within the limitations and certifications of his state credential requirements, 2) within the definition and province of this work in his school system, and 3) who has obtained a master's degree in psychology or education which is clearly related to the work he is doing.

9. Clinical Psychology

By clinical psychology is meant that traditional branch of psychology which has been chiefly concerned with the role of the psychologist as a psycho-diagnostician. The specific training which has been broadly subsumed in the clinical model has been focused on the development of a coherent theoretical model of personality and behavior relating to a series of dynamic entities which are believed to guide and motivate the behavior of the organism in a cause-effect relationship. The operation of this model has tended to focus on the outlining of pathology, clinical symptomatology, categorical labeling of clusters of behaviors as derived primarily from observation, interviewing, and testing analysis. The general approach to behavior change has been through either individual or group psychotherapy in which the goals of psychotherapy have been intellectual assimilation of repressed, or emotional or blocked processes in order to free the individual from various psychological forces which are generally conceptualized to be a-moral, blind, instinctive, and compelling.

This definition recognizes that there are shades and varieties of clinical psychologists, but the essential feature here detailed is a psychologist with training in psychodiagnostics and pathological determination who bases his course of treatment on an a-priori model of human nature which is based on hypothetical-deductive principles rather than empirical observational behaviors.

10. Self-Concept Theory

By self-concept theory is meant a phenomenological approach to counseling which engenders some of the characteristics of the clinical model, but is typified more specifically by the counseling approach of Carl Rogers. This model is based on phenomenological and existential categories which are usually not related to testing procedures, but to a subjective evaluation process entailing many global constructs such as self-concept, adjustment, empathy, etc. Treatment here usually refers to an insight level of operation wherein the counselor helps the client to develop his own skills in self assessment and evaluation through non-directive verbal and non-verbal methods of treatment.

11. Eclecticism

By eclecticism in this study is meant a series of procedures and techniques joined together by some pragmatic utility and experience factor rather than based on the derivation from philosophical or psychological systems.

12. Micro-Consultation

By micro-consultation is meant a technique modeled after the micro-teaching format developed at Stanford University in 1963 (Bush and Allen, 1964). Micro-consultation and its precursor, micro-teaching, consist of a series of brief face-to-face encounters designed to give the trainee practice in acquiring specific skills in a naturalistic setting. In this institute this technique was used to provide a series of scaled-down teacher-psychologist interviews through which a number of specific consultative skills could be learned by the enrollees. It utilized television filming and immediate feed-back within a learning format.

Some Limitations to the Study

As may be noted from the foregoing discussion of the rationale and brief overview of the design of the institute, an attempt was made to cast this entire institute selection and treatment process into an experimental design wherein the institute itself was constituted the gross independent variable and the changes in cognitive reorganization and behavioral skills on the part of the enrollees, the dependent variables. To a great extent the experimental design was implemented as planned. At a later point certain deficiencies will be mentioned. But the effort itself was an attempt to generalize from a sample of school psychologists who applied from all over the nation.

The nature of the sample is perhaps the most limiting factor in terms of the generalization of institute findings. What will be discussed in the following chapters can be generalized only to those individuals who: 1) have received minimal professional training and recognition in the field of school psychology, and 2) who both knew about and applied for an NDEA institute in school psychology during 1967.

To be specific there are four areas that limit the representativeness of the sample of school psychologists. The first is the small size of the sample. Much of the study is based on 30 enrollees and

16 controls. At no time do the data analyses refer to more than 112 subjects. This probably represents about 1% of the total number of practicing school psychologists in the country. A second selective factor is that all participants held a master's degree. This factor obviously excludes sub-master's degree psychometrists and also Ph. D. psychologists. A third factor relates to age. Most of the applicants and participants in the institute were in their late thirties and early forties. There were comparatively few new psychologists in their twenties, etc. A fourth and final selection factor refers to the fact that these were psychologists who learned about the institute and volunteered to attend such a training program.

Thus the findings of the research to be reported may be generalized to the national sample of school psychologists only under those specific circumstances outlined above. Despite this limitation, however, this is a considerable extention of previous institute research efforts. For well over 900 school psychological personnel applied for the institute from nearly every state in the union. Application packets were sent to these individuals and 225 individuals returned portions or all of the materials which were sent to them. Subsequently, 112 individuals were judged to meet all of the criteria of the institute. It was from this group that a final random assignment was made to the alternate treatment conditions of the design.

Summary

The significance of this study is related to the fact that seldom are demonstration-training grants conducted in accordance with a research design. It is one matter to present a new body of didactic instruction and training, and quite another to evaluate the skills which have been taught and learned. The question is not so much whether new materials and procedures were cognitively acquired and learned, but whether these new procedures were translated into practice. Objective data are necessary to justify such an effort. Much of the value of this institute comes from the intensive planning which took place in the writing of the proposal, the staff meetings, the contributions of individuals, the innovative nature of the instruction, and the rigorous follow-up which took place. As has been indicated in the foreword, this institute represents a tremendous investment of time and energy by the director and by other members of the staff. Dr. Dwight L. Goodwin was particularly involved in nearly every step of the process. His specific contributions will be mentioned in the process of this report. Dr. William Garvey and Dr. Calvin D. Catterall were also deeply involved in the planning, execution, and follow-up of the study.

Outside of the significance of the data gathered to the development of school psychology, the intensive evaluation of the institute may lead to a better use of existing personnel, the involvement of research designs in future efforts, and contribute to the meaningful implementation of the new educational manpower development act. For if thousands of individuals are to be trained in specific new skills, it behooves the government and those who dispense federal funds to insist on the most rigorous experimental designs possible under the circumstances. In this way good training will be ensured and documentary evidence will be accumulated regarding the efficacy of such massive training efforts.

CHAPTER II

HISTORY AND RATIONALE OF ALTERNATE MODELS OF SCHOOL PSYCHOLOGY PRACTICE

There is increasing evidence today that school psychology practice has been weighed in the balance and found wanting. Some of the factors which have contributed to this judgment are: 1) the failure of educational psychologists and theorists to determine what are the lawful and relevant determinates to learning in a school setting, 2) the weaknesses of traditional psychodiagnostic methods in providing adequate assessment of relevant behavioral phenomena, 3) our earlier inability to provide a repertory of prescriptive interventions designed to effect a strategy for coping with learning problems, and 4) our failure to develop relevant criteria of effective human behavior and the means wherewith to assess our approximations to these criteria. In briefer terms our practice of school psychology has been limited by an inadequate conception of WHAT is school learning? HOW can we assess it? WHAT can be done about promoting it? and HOW can we determine whether we have been successful or not?

The purposes of this chapter are three-fold. The first is to discuss the development of school psychology within the context of the above central questions as they relate to the development of education and psychology; the second is to compare some specific approaches to school psychology practice within the context of these same questions, and the third is to provide an overall rationale of a social-learning approach to school psychology.

1. An Overview of Educational and Psychological Development

Without any question one source of agreement among educators and school psychologists is the fact that the school psychologist must be a dual professional That is, he must be capable of administering and interpreting psychological tests and procedures within the context of the school setting. The specific balance of his skills as demarcated by the limitations of training programs and time and cost factors in reaching criterion performance dictate to a large extent the relative sophistication of his actual performance. Nonetheless, three sets of factors all interrelated seen to have had considerable impact on the development of school psychology. These are: 1) the educational enterprise in its philosophy and pragmatic application, 2) the development of psychology as a distinct discipline, and 3) the development of training programs. These factors are all interrelated and constitute an interaction matrix which is difficult to evaluate in its composite nature, but may yield to some separate analysis.

The Educational Enterprise

Education can be considered as a microcosm of cultural synthesis. It is a miniature world in which there is a confluence of many philosophical, social, and behavioral dimensions. As a discipline in itself it has long been dependent either on the philosophical assumptions of predominant approaches to epistemology, ontology, and axiology, or it has been influenced strongly by current methodologies of approach. In short, what is done in the educational enterprise is a by-product of predominant thinking. Nearly all great philosophers, dictators, social reformers and exponents of revolutionary change have concurred in their conviction that the educational system of a people is a primary control mechanism for the development of specific skills and attitudes as well as behaviors on the part of children. As a result, education has been viewed as a primary mechanism for the cultural transmission.

The problem of WHAT constitutes school learning has then been related directly to the pervasive and pivotal issues which confront society at any given time. The application of these philosophical or methodological ideas is strictly limited by the potential of teachers and administrators to initiate change in the fabric of society. Because philosophical and methodological ideas can be more easily expressed than implemented, the process is slow and sometimes halting.

The American educational enterprise has had a rich and varied experience. The cultural setting of a rural-agrarianculture was characterized by independence, public and private support, which then yielded to the development of common public-supported schools as a mechanism for cultural synthesis in the mid-1800's, and finally issuing forth weakly into the industrial and technological development of the 1900's. Presently, the schools constitute one of the greatest enterprises in the nation with millions of students engaged in education ranging from pre-school experience to post-doctoral training programs.

The question of what constitutes learning has been answered by three different models within the history of American education. Most of these models still remain in some modified vigor or form within the schools. These three models may be identified as: 1) the mental discipline model, 2) the philosophy of experimentalism identified with John Dewey, and 3) the mental-hygiene approach basically derived from psychoanalytic and medical models of personality adjustment. To a large extent these conflicting models of teaching and learning have variously conceived of the teacher as a content-oriented purveyor of knowledge, a guide for the progressive evolution of self-discovery experiences, or as a kind of junior psychotherapist in the schools. They have viewed the students, implicitly or explicity, as terminal objects to be programmed with knowledge, as mechanisms for exploring the environment, or as individuals whose mental and physical health are essentially jeopardized by the aversive environment of civilization.

Few of these approaches remain in pure form in the school system today. And yet teachers do believe in their role as a cognitive purveyor of knowledge, most believe that self-discovery and problem-solving is an important social skill to be learned in education, and nearly all acknowledge that personal adjustment and stability are related to adequate learning. For in each of these models there are certain elements which appeal to the educational enterprise. Moreover, there would appear to be sufficient research to justify the importance of cognitive effort through organizers and physiological exercise of mental activities to not rule out completely (as Thorndike and others did) the possibility of vast learning taking place through the systematic and regular development of skills - including cognitive ones. So likewise, exploration of the environment and the development of problem-solving skills are important factors in individual learning. And finally, there is the obvious recognition that somehow individual children must learn to come to terms with their own abilities and personality as they interact with their environment.

As each of these systems pervaded the public schools defining learning and the teaching process in differential ways, so the second question of HOW can we assess learning was answered differently by each of these approaches. Classical humanistic learning judged the assessment of learning primarily in terms of cognitive growth and development joined to verbal abilities. This can be readily seen in terms of the assessment devices used. Oral examinations, essay examinations, the ability to think on one's feet and defend ideas were all considered methods of evaluating the product of education. Theses, dissertations, term papers, and passing of extensive examinations also provide indices of assessment. But for the most part, these approaches were subjectively evaluated by the master teacher, the oral committee or colleagues.

In the philosophy of experimentalism, much more emphasis was placed on a process-orientation involving problem-solving skills primarily identified with social goals. However, since these processes were less susceptible to clear evaluation than the methods used by the classical humanistic approach, and because of the confluence of social philosophy with experimentalism in the thinking of Dewey and others, a need was felt for objective evaluation. This need was filled through group testing procedures. Thus, group testing as an objective method of comparing individuals in relationship to group ~~norms~~ was considered to be a more important method of evaluation characterized by the well-known biases of experimentalism in philosophy, i. e.

objectivism and peripheralism.

Within the mental-hygiene approach the methods became once again more individualistic with the development of diagnosis, prognosis, and treatment procedures incorporated within the frame of reference of education. The teacher as a therapist was more concerned with providing a wholesome environment for the development of well-adjusted children, than in either of the other major approaches.

Certainly, the goals of the approaches and the processes used to evaluate educational change were then related to curriculum objectives. Curriculum objectives should focus on the answer to the question WHAT can be done? The approach of classical humanism was primarily one of systematic organization providing implicitly or explicitly the undergirding framework or scaffolding (as Ausubel in recent times has referred to it) for cognitive concept formation. Thus, knowledge could be divided into specific areas with sub-areas and specialities. These sub-areas could be then studied, memorized, learned in a variety of techniques. The approach of experimentalism was focused on the teaching unit with social goals and democratic values providing much of the curriculum emphasis. Finally, the mental-hygiene approach was much less precise in terms of curriculum, drawing primarily from the other areas but specifying certain kinds of games such as socio-drama as curriculum vehicles.

Since each of these particular models did have a philosophical base for its approach which could be identified as: 1) classical realism, 2) experimental pragmatism, and 3) positivistic relativism, they did more or less efficiently prescribe the parameters of the learning process, the methods of attack, the goals for the process, and the curriculum vehicle to be used. In addition, however, they did make varying attempts at the judgment of what constitutes an effective criterion of the educational process. They sought to evaluate their efficiency against criteria such as the mental-disciplined humanist, the truly democratic man, or the well-adjusted personality. Since these ideas are only constructs, any attempt at the assessment of measured progress towards these goals was bound to suffer from a lack of specificity. Moreover, each of these ideological constructs was applied to the specific power structures of the school, and the interactive effect of all three models was applied differentially within the specific system.

The Development of Psychology

Even as there has been the development of alternate models of educational practice, so psychology has developed in specific ways. Cronbach (1957) has pointed out how there have tended to be two main streams in psychology which have gradually drifted apart. He has identified the experimental psychology of behavior as one of these streams and the study of what might be called comparative psychology as the other - termed by him the correlational stream in psychology. Experimental psychology until very recently has remained by choice relatively aloof from the pursuit of practical and "applied" problems in psychology. It has tended to focus on "pure" research utilizing animal and infra-human subjects as the source of experimentation in learning. It has been chiefly concerned about treatment effects on the dependent variables of behavior. Correlational psychology, on the other hand, has emphasized relationships between variables and has focused chiefly on the descriptive characteristics of various measurements and behaviors in an attempt to establish the parameters of measurement phenomena. Historically, educational psychology with its emphasis on measurement of individual differences and test construction, clinical psychology with this inheritance and another derived from the medical psychoanalytic model, social psychology with its inheritance from Gestalt psychology and field theory, and counseling psychology with its emphasis on phenomenological-existential constructs or multi-factor trait analysis have all been examples of the correlational stream in psychology.

Historically, there are many influence sources within psychology which have tended to determine development. Unquestionaly, the struggle for scientific independence from philosophy has been one of these major themes. Until the mid-nineteenth century in Europe, and not until about the beginning of the 20th century in this country was it possible to separate either education or psychology from philosophy. As is well known, psychology began as a branch of philosophy concerned with the nature of man. Most of its history until the 19th century follows closely within the history of philosophy. In the 19th century psychology gradually began to struggle for independence. Kant had maintained in the late 18th century that psychology could never be a science because its chief focus was on man's internal states and they were not susceptible to measurement in objective methods. Herbart attempted to demonstrate that it was possible to measure intervening variables and subjective mental states. Fechner and Lotze continued this direction with studies on just noticeable differences. But it was with the confluence of physiology and psychology begun with Muller and effected by his students in the persons of Helmholtz, Bruecke, Dubois-Reymond and others such as Maudsley in England, that psychology emancipated itself from philosophy and declared that henceforth the path to true psychological knowledge was through physiology.

The physiological bent of the Helmholtz school plus the structuralism of Wundt in his attempt to develop some kind of a mental associationist chemistry became a predominant theme in German and continental psychology. Somewhat later, in the 1870s other psychologists denied the cleavage which had developed separating psychology totally from philosophy. Brentano insisted that the true subject matter of psychology was the mental phenomenon of perception and mental states, rather than simple sensation. The Würzburg school reaffirmed the subject matter of psychology to be mental phenomena. The development of testing methodology both in its beginnings with Galton and Binet, was further elaborated within the United States. Finally, the influences of Freudian psychoanalysis and Gestalt psychology, both of which emphasized either unconscious determinants to behavior or perceptual structure, were gradually subsumed into the correlational stream of psychology.

Within the United States psychology was not separated from philosophy until later. But here also, the two streams continued to develop. William James, though influenced by the experimental stream leaned heavily towards psychology as a branch of philosophy and declared time and again that education and psychology could scarcely develop the scientific rigor characteristic of physiological studies. Titchener reaffirmed the Wundtian structuralism of synthetic associational chemistry. Thorndike developed test methodology somewhat within the framework of experimental procedures. To this must be added the development of the vocational movement with its later accretion of counseling methodology, the resort to phenomenological and existentialist thought, and the simultaneous development of clinical psychology as a sub-speciality of psychology most primarily identified with psychodiagnosis.

In psychology as well as in education the same fundamental questions were asked: WHAT is learning? HOW can it be measured? WHAT can be done about it? and HOW can we determine whether we have been successful? For the most part the experimental stream in psychology has voluntarily excluded itself from the matters of applied psychology. Experimental psychologists have consistently indicated that experimental psychology could not provide answers about applied learning. Moreover, many experimentalists have felt that it is important to do much more basic research on the nature of learning before any real application could be made to human learning in the educational setting. Thus, what has been evident in psychology has been chiefly felt through the correlational streams of psychology. Here learning has been variously interpreted by educational, clinical, and social psychologists. Some premature bridges have been made, extrapolating from infra-human learning studies to human behavior. Other correlational streams in psychology have variously emphasized laws of effect, organization, insight, emotional affectivity, perception and a host of other variables.

The measurement of learning has been evaluated primarily through testing, with the underlying assumption that a test score reflects complex hereditary-environmental potentialities or functional levels of skill acquisition. The development of sophisticated test methodology including factor analysis has yielded alternate delimitations of basic skills and components in terms of structural entities.

Treatment of behavior has been generally guided by certain assumptions such as: 1) the priority of verbal and cognitive behavior over peripheral behavior, 2) the functional relationship between sources of disturbance and behavioral symptoms, 3) arbitrary and subjective concepts of what constitute effective criteria of human behavior, 4) primary emphasis on psychodiagnosis without concurrent evaluation of the behavioral correlates to hypothetical-deductive intervening variables, and 5) emphasis on diagnosis rather than treatment.

When one takes into consideration then, the disparate influences within the educational enterprise, and the similar confusions within the correlational psychological stream, it is then possible to ascertain some of the real difficulties which have existed for those who have practiced school psychology in the American schools. For school psychology has by its very nature been forced to make some kind of a bridge between the educational models variously defined and extended, and the psychological training programs which have been influenced by such a potpourri of structural, functional, and process-oriented aspects such as testing, clinical appraisal, counseling process, and elements of medical diagnosis.

School psychologists as hybrids have had to come to task with these same questions and since both their educational inheritance and their psychological inheritance have been essentially grafted on to the educational enterprise from external sources or disciplines it is easy to understand why there has not been either a clearly defined set of training objectives or a relevant school psychology curriculum. This is not to state that current programs of training are not doing a better job than earlier programs, but rather to emphasize one major point that the phenomena of education *per se* have never been adequately subjected to the scientific method. For science is the search for lawful relations between natural events or variables. It is in the systematic ordering through observation, definition, and clarification that one determines the legitimate phenomena of a science. As information accumulates, scientific facts can be stated as laws and these laws can be organized into a model that describes - perhaps limitedly at first - the scientific nature of a class of phenomena. After taking a brief look at the historical development of school psychology within this country we shall resume the argument for a definitive model of school psychology practice based on classroom learning phenomena.

2. The Historical Development of School Psychology

School psychology began in the late 1800s in the United States. Two educational tasks became the primary focus for the school psychologist. The first of these was to function as a specialist for testing children for special classes. The second was related to the psychodiagnosis of adjustment difficulties.

Testing and Clinical Models

The first special classes were established for the mentally retarded in Europe as early as 1859 (Gray, 1963, Chapter 2). In the United States special classes for delinquents and mentally retarded were started in the late 1800's. Providence, R. I. started a school for this purpose in 1896 (Gray, 1963, Ch. 2). Within six years similar schools were started in Boston, New York, and Los Angeles. By 1911 there were 220 cities with special classes (Gray, 1963, Ch. 2).

At the same time special classes were starting, others were developing tests to measure intellectual functioning. In Europe Simon and Binet developed their tests of intelligence, and by 1908 Henry H. Goddard published the first English version of the Simon/Binet tests. By 1916 Louis M. Terman published the first Stanford revision of Binet's scales. These tests plus many others, like the Sequin Form Board and the Pintner-Paterson Performance Scale, were used for special class placement (Cutts, 1955, Ch. 3). Meanwhile Thorndike and many others developed group testing procedures. Arthur S. Otis published the first group battery of intelligence tests standardized from fourth grade to college level in 1918 (Magary, 1967, p. 12).

At first teachers were trained to be testers. Later the need for a full time evaluator was evident. Testing became identified as a primary function of school psychologists.

The second major function of the school psychologist, i. e. psychodiagnosis, began with Lightner Witmer in 1896. Witmer is generally regarded as the first acting clinical psychologist as well as a founder of school psychology. He started a clinic at the University of Pennsylvania to treat children with physical and emotional problems that hindered their school progress. Magary (1967) claims that both clinical and school psychology were begun at Witmer's clinic. Witmer saw his main function as being the psychodiagnosis of children's adjustment problems.

In 1899 a Department of Child Study was established in Chicago to treat "backward and difficult children" (Cutts, 1955, Ch. 3). Similar child treatment centers were soon established in Detroit, Cincinnati, Cleveland, and Philadelphia. These centers followed Witmer's clinic as to functions and purposes.

From these two initial beginnings the role of the school psychologist began to develop. In 1915 Arnold Gesell was the first person given the title of school psychologist. He was hired by the state of Connecticut to travel to rural areas and examine mentally retarded children (Cutts, 1955, Chp. 3). Three subsequent movements have affected the development of school psychology. The first was the guidance movement. This movement started with Frank Parsons in 1909 when he published his book Choosing a Vocation. The original focus of this movement was vocational planning, but in recent years the focus has moved towards individual and group counseling, and child adjustment in school, with peer groups, and at home. Also, educational and vocational planning, job placement, and follow-up services are a part of guidance services today. The second movement was the mental health movement. Clifford Beers in 1908 published a book titled A Mind That Found Itself that attracted much attention to the problem of mental illness. The original emphasis somewhat psychoanalytic in nature focused broadly on adjustment and prevention. The Mental Health movement is still active today on the broad base of prevention of mental illness. The most recent impetus was derived from World War II. The various number of veterans in need of psychotherapy overtaxed the existing numbers of psychiatrists and the clinical psychologists of the period were not adequately trained for the task. Thus universities revamped their training programs in clinical psychology to meet the need. This movement has generally been patterned on the medical model. From this approach, the concept of the school psychologist as a clinical psychologist was engendered.

New Approaches in School Psychology

Throughout most of the history of school psychology two primary models have been developed. These are 1) the testing model and 2) the clinical model (Gray, 1963, Ch. 2). In addition to these traditional models the last few years have seen the development of several new variations. These variations might be called 1) the research emphasis, 2) the neurological emphasis and 3) the consultation emphasis.

The testing model is completely diagnostic in application. The tool of the model is the test. By administering and interpreting various tests the school psychologist evaluates the child's abilities and handicaps and makes recommendations of action to aid the child. The tests may be individual or group administered. The test results are usually used for placement in special classes, but they may be used for curriculum evaluation or retesting for special class placement follow-up. This model does not readily provide differential procedures for treatment. It does provide very considerable test results. The testing model has never been directly recommended as a full-time function for the school psychologist (Gray, 1963; Cutts, 1955). The position of the school psychometrist was designed to carry out the testing function and leave the school psychologist free for other duties.

After World War II the Boulder Conference defined the major function of the clinical model to be psychological diagnosis of children's developmental and/or adjustment problems (Raimy, 1950). This model stems from Witmer's pioneer work and is based on the principles of clinical psychology. Children are taken individually or in small groups where their difficulties are diagnosed and, through psychotherapy, they are helped to cope with their problems. Psychotherapy is a slow and undefined process with subjective results (Raimy, 1950). Short-term psychotherapy in conjunction with help from the child's teacher is advocated by some writers (Henriguez, 1964; Starkman, 1966) but no new ideas about evaluation of the therapy have been offered. This model may be applied to the school setting but it 1) limits the number of children the psychologist can help, 2) removes the psychologist from the mainstream of the school setting, 3) exceeds the professional capabilities of the school psychologist, and 4) reduces the flexibility of the psychologist (Gray, 1963, Ch. 2; Valett, 1963, Ch. 11). It is suggested that the school psychologist can serve a valuable function by evaluating a child's readiness for psychotherapy (Valett, 1963, Ch. 11) and by working as liaison between the psychotherapist and the school (Losen, 1964). An interesting definition of psychotherapy comes from the Boulder Conference: "Psychotherapy is an undefined technique applied to unspecified problems with unpredictable outcomes. For this technique we recommend rigorous training" (Raimy, 1950, p. 93).

The next two approaches, i. e. the research model and the neurological model are not intended to be complete courses of action for the school psychologist to follow, but are intended to be areas of special attention and importance.

The importance of research to education and to the learning processes cannot be over-emphasized. Towards the stimulation of research activity the research model is focused. Research to the school psychologist has always been on a "if he has time" basis (Cutts, 1955, p. 41). While the school psychologist should not be a full time researcher, there are many substantial contributions to the understanding of human behavior and learning problems that he can make. The schools provide a great population and sample of man's difficulties. This is an excellent place to carry out research (Valett, 1963, p. 41). Many school psychology training programs put much emphasis in training their students in the methodology of scientific investigation. However excellent and worthy is research, its enactment in the school situation has been at a low level. Susan W. Gray proposes that the school psychologist take a more aggressive approach to research and become an empirical data-oriented problem-solver (Gray, 1963, Ch. 4). Gray states that the school psychologist is in an excellent position to gather information that can be applied to the many problems that exist (p. 55). Within this context of data gathering and problem solving, contributions to psychological theory development may also be made. Education needs new approaches based on data rather than speculation and ingenuity (Mathis, 1965). Thus, through the application of research methods the school psychologist can add much to the development of psychology as a science and a profession (Valett, 1963, Ch. 3). It should be remembered that this approach should not be considered as the primary role of the school psychologist, but as an integral part of his total approach to the child and his growth.

The neurological approach deals with the physiological aspect of man's functioning and behavior. Such handicaps as brain damage, visual-motor impairment, the hyperactive child, the minimally-brain-damaged child or Strauss syndrome child have come to be incorporated as a part of the clinical diagnosis of children. Children who may be empirically observed as awkward, easily distracted, hyperactive, impulsive, irritable, socially immature, etc., have been identified as having considerable defects in perceptual-motor areas. Two of the pioneers in directing diagnosis into this area were Strauss and Lehtinen (1947). Others such as Kephart in his Perceptual Rating Scale and Frostig in her Developmental Tests of Visual Motor Perception (Magary, 1967) have also contributed much to the diagnosis of children with perceptual problems. Various curriculum materials have been developed for the training of children who are judged to be brain-damaged. A number of tests such as the Ellis Visual Designs Test (Wood and Shulman, 1940; Lord and Wood, 1942; Goldenberg, 1953), the Archimedes Spiral (Gallese, 1956; Berger, Everson, Rutledge and Koskoff, 1958; Gilberstadt, Schein and Rosen, 1958) and the Wepman Screening Test for Aphasia (Magary, 1967) have been used in addition to Kephart and Frostig materials to diagnose minimal brain-damage and/or perceptual distortion.

The value of this emphasis in the clinical model is the specific orientation towards perceptual diagnosis. However, as is often the case with specific emphases they assume the proportion of a fad. Thus, many schools today have invested heavily in testing materials or perceptual training devices which have not yet been thoroughly field tested in terms of their efficacy. Further, one is still tempted to ask what relationship the finding of neurologically handicapped diagnosis has to a specific program of remediation. Though the psychologists involved in this focus have attempted to design a course of remedial strategy for coping with learning difficulties of this nature, it is the judgment of this writer that these kinds of difficulties represent only one type of problem and that in view of the uncertainty of establishing such diagnoses as minimal-brain damage (even in medical centers) there may be much too much extra testing involved here that is unmerited in terms of treatment strategies.

The final model which has been proposed for school psychology practice really embraces all of the others. This is the consultation model wherein the school psychologist is considered as a consultant drawing upon many disciplines, and techniques to help children, teachers, parents and social organizations cope with children. A number of authors in school psychology literature advocate this model (Leton, 1964; Dunlop, 1964; Schmidt, 1964; Derner, 1965; Magary, 1967; Maurer, 1967; and Reger, 1967). The main focus of this model is to draw from all sources. Not only are different models integrated into the approach but all of the personnel and facilities of the school and the community are also involved. The central focus of this model is the teacher (Magary, 1967; Gottsegen, 1960). Through the teacher the school psychologist-consultant draws upon all sources and aids the teacher to help the child. The idea of this model is to make the best use of the school psychologist's abilities and skills for the greatest number of children. In addition to working with teachers and other school personnel to help children, the school psychologist should also emphasize these roles: 1) advisor on curriculum development, 2) program evaluator to make better use of personnel and facilities, and 3) data collector and researcher. The school psychologist is also to become cognizant of community-wide resources such as clinics, psychiatrists, medical doctors, social workers and clinical psychologists.

The problem with this model is that it does not offer a distinct plan of operation for the school psychologist. It outlines many functions for the school psychologist both within the school situation and without. It does not suggest any method for his recognizing priorities, or organizing the impact of his program. As with most eclectic models it pulls together highly contradictory approaches, becomes generally atheoretical, and functions chiefly on a pragmatic base.

3. Need for a New Model in School Psychology

From what has been written thus far in this chapter it is apparent that school psychology as a hybrid speciality in psychology and education has been forced to cope with a variety of models of learning as well as a variety of models in psychology. Operationally or functionally, this has tended to mean that the school psychologist has been prepared in a training program somehow designed to meet requirements in both education and psychology to accomplish a job in the schools wherein the primary phenomena dealt with are variously interpreted, the methods used to cope with these phenomena subjectively related to the shifting phenomena, and the criteria of effectiveness for the most part not ascertained. The school psychologist has been variously identified as a test-kit carrier, a junior-sized psychotherapist, a designer and implementer of research, an overall trouble-shooting guidance consultant, and more recently as a kind of neurological-psychological diagnostician.[1]

As far as the writer can determine, three major models in school psychology are functioning within the United States at present. These systems or models overlap in their specific functions, and are not clearly demarcated as such. They represent combinations of both educational practice and psychological development. Figure 1 provides a schema of the Medical-Clinical model, the Phenomenological Counseling model, and the Eclectic-Consultation model. In addition, a Social-Learning model is presented as a fourth alternative.

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[1] Perhaps nowhere is the confusing dilemma and conflicting expectations for the school psychologist more adequately described than in the composite list of job descriptions which was reported from one city and is cited by Magary (1967, pp. 55-56) -

(Continued next page)

Footnote continued:

A. Works with other school staff on problems of individual children.

1. Accepts referrals from a variety of sources.

2. Evaluates children individually using a wide range of sources of data from records, conferences, interviews, observations in the classroom and on the playground, as well as by his own instruments of evaluation in all aspects of personality.

3. Synthesizes and interprets the evaluative data, either chiefly on his own, or more hopefully in a staffing where interchange of ideas and points of view may be brought to play.

4. Confers with adults and children on ways of meeting the problems of the individuals he has studied.

5. Carries on individual and group therapy, formal or informal.

B. Works with other school staff on positive mental health programs.

1. Encourages thoughtful and careful utilization of group testing evaluation possibilities in a sound guidance program.

2. Acts as consultant to a variety of school, parent, and community people, individually and in groups.

3. Concerns himself with mental health aspects of the entire school program. A positive mental health program leads to concern with such topics as curriculum development, in-service training of teachers, staff personnel practices, and much more.

C. Works to improve the psychological services.

1. Contributes to the training of new school psychologists or student psychologists.

2. Re-evaluates the role of school psychology in the school program and his own performance.

D. Contributes to advancement of knowledge and understanding of the educational process.

1. Initiates or cooperates in research or advises on research design.

2. Interprets research findings, especially those from other fields of pure and applied psychology, not otherwise promptly brought to the attention of educators.

Magary points out that this list of specifications is a roster of duties no one person could well undertake. More indeed, this writer would venture to state that any one who could undertake all of these specifications and carry them off well deserves to be President of the Universe in perpetuity.

Figure 1

Models of School Psychology Practice

Category	Medical-Clinical	Phenomenological Counseling	Eclectic Consultation	Social Learning
Parent Sources	Psychoanalysis Neo-Psychoanalytic Rational Psychotherapy Medical Model Clinical Psychology	Self-Concept Theory Ego Psychology Medical Model and Clinical (partial) Social Work	Experimentalism Progressive Ed. Vocational Guid. Measurement Theory Social Work Teaching	Social Psychology Cultural Anthropology Experimental Psychology
Philosophical Derivatives	Scientific Realism Logical Positivism Logical Empiricism	Phenomenology Existentialism Idealism	Experimentalism Idealism	Scientific Realism
Specific Focus of School Psychologist	Psychotherapist	Counseling and Guidance	Problem-Solver Consultant	Change Agent Researcher-Consultant
General Goals	Psychotherapy Mental Health	Guidance Specialist Adjustment	Guidance Specialist Staff Education	Reduction of Maladaptive Behavior - Eliciting of Appropriate behavior
Primary Methods (excluding testing which is common to all)	Psychodiagnosis Case Conferences Ind. Psychotherapy Play Therapy	Individual and Group Counseling Group Testing	Conferencing In-Service Training	Behavioral Analysis Assessment: Individual & Group Strategy Making and Implementation
Evaluation Criteria	Psychologist Evaluation and or Subject Evaluation Clinical Studies	Psychologist Evaluation and or Subject Evaluation Self-Concept Change Studies	Number of Activities, Tests.,etc. Research Studies	Base-line pre- post measurement of behavioral phenomena
Strengths	Psychodiagnosis	Counseling Skills	Concern with School as Whole	Methodology for Changing Behavior
Weaknesses	Lack of Relevant Treatment Procedures	Lack of Precision (Global Outlook)	Diffused Focus	Presently Immature in Development

Although the existing models of school psychology practice have been effective in varying degrees, it has been the argument of the writer in this chapter that the real efficacy of the school psychologist has been hampered: 1) by a variety of conflicting models of education and psychology based on confused notions as to the primary phenomena of learning involved, as well as the goals, methods, and criteria of evaluation derived chiefly from several different disciplines and philosophical bases; 2) by inadequately conceptualized criteria for evaluating results of practice both within and between these several approaches; 3) by differential training programs which have attempted to meet, compromise with or otherwise synthesize disparate elements and foci into unified training objectives; and 4) by an inadequate philosophical base as well as a weak scientific methodology. In addition to these problems, the well-known recent emphases on disadvantaged children and the crash programs of the federal government, very often hastily implemented on the basis of suddenly available funding, inadequately conceptualized theoretical or evaluative bases, and limited personnel, have forced school psychologists to operate generally as consultation-resource people who subjectively try to fit various tools and methods from their repertorie to the tentative and expedient goals of the school in a pragmatic or eclectic manner.

Requirements for a Comprehensive School Psychology Model

If school psychology is to provide a series of services to the school community in a comprehensive manner, it is imperative that somehow a logical model be developed. It is the assumption of the writer that a scientific model can be so developed utilizing the principles of logic and science to serve as guidelines. There are two assumptions which are preamble to what follows: 1) that classroom learning constitutes a legitimate field of scientific phenomena and inquiry, and 2) that psychological practice in the schools can be ultimately shaped into a scientific process. Without these two assumptions any attempt to construct a scientific model for school psychology practice is doomed to failure.

The logical requirements of a comprehensive model for school psychology practice are five-fold:[2] 1) the phenomena of the model must be empirically observable, definable and classifiable, 2) the interpretation of the phenomena must be non-eclectic, i. e. describable in terminology corresponding as accurately as possible to the simplistic empirical fact, 3) the ordering of the phenomena must be logically consistent and parsimonious yielding adequate discriminatory judgments, 4) the model must possess power functions for assessment and evaluation of differential phenomena within the model, and 5) the model must be philosophically sound and compatible with the scientific approach. These logical requirements will now be discussed in fuller detail as they apply to a social learning model of school psychology practice.

4. A Social Learning Model for School Psychology

It is the contention of the writer that what may be called social learning theory provides a logical and scientific basis for school psychology practice. It will be argued here that social learning theory provides: 1) a comprehensive philosophically based and scientifically viable framework for describing, analyzing, and treating the phenomena involved, 2) is susceptible to scientific investigation, through the determination of adequate methods of assessment and evaluation of phenomena, together with a coherent testable set of treatment strategies, 3) provides the school psychologist with a role consonant with the nature of the phenomena he works with, and 4) provides a rationale and methodology adequate for determining criteria of efficient operation, i. e. success or failure. In short, social learning theory provides a comprehensive scientific model of school psychology practice which possesses power potential for describing, assessing, and treating basic learning phenomena.

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[2] I am indebted to Dr. Finley Carpenter of the University of Michigan for first discussing some of these requirements with me in 1958.

Social learning theory can be considered: 1) as a body of scientific knowledge derived from studies of culture, the environmental press, skill acquisition, social psychology, and behavioral learning and psychotherapy.

The Empirical Phenomena of School Learning

One of the first tasks of any scientific endeavor is to define the basic phenomena which will serve as the separate focus for investigation. By way of consideration one may look at either global constructs which have been used to refer to learning, or very specific concepts. Examples of the former are learning as an "art" wherein learning was considered product of personality, ego development, motivation, mental discipline, or problem-solving. These global constructs represent humanistic constructs, intervening variables, or an array of complex skills. In short, they would appear to be the products of learning rather than the descriptive characteristics of learning itself. So likewise, the intensive animal studies of learning with the identification of the stimulus-response model appear to be a clear reductionism to an overly simplistic and atomistic term. Thus one definition of the phenomena involved is apparently too global for precision in distinction and classification and the other approach is too minute. Surely it is important that we should be able to determine the beauties of a sunset over the mountains and trees, and it is also important that we be able to zero in on the nature of a leaf in a particular tree. This may be called perspective. But in classroom learning if we are to deal readily with phenomena that can be manipulated and controlled, we must find an intermediate position which is sufficiently specific to allow for definition, but not so minute that it cannot be utilized meaningfully.

Such a construct can be found in the notion of skill. An empirical evaluation of the nature of classroom learning, plus the evaluation of a considerable amount of research literature in the specific areas of human learning and environmental "press", would appear to support the definition here that the skill concept defined as a functional ability to perform a specific task is the legitimate behavioral phenomenon of classroom learning.

Recent research and writing in school psychology has suggested rather obliquely that school psychology is moving towards the enhancement of task-oriented learning (Bower, 1964; Bardon, 1964; Bardon and Bennett, 1967). Moreover, the specific research of Gagne in the description of conditions of learning (1965), the cognitive emphasis of Ausubel (1965) and Bruner (1966), and the considerable research studies of the behavioral learning group found in Bijou and Baer (1965), Patterson (1966), Ferster (1962), Williams (1959), Lazarus (1965), Bandura and Walters (1963) and Hewett (1967) have provided the research background supportive of this definition of classroom learning phenomena. In addition, supporting neurological and physiological evidence has been provided by Berlyne (1960), Taylor (1962), and Vygotsky (1962) who have identified the neurological correlates of skill acquisition through sensory modalities. Further recent research has identified the chemical-electrical productions which occur between neuron and dendrites as a product of learning.

Each of these researchers in their own way has helped to provide a research background which would support the notion of skill acquisition as the legitimate focus of the educational enterprise. For example, Gagne (1965) has provided a sequential learning model which takes into consideration the step-by-step process of learning through signal and stimulus-response learning to chaining, verbal association and subsequent multiple discrimination and generalization. Taylor and Berlyne (1962, 1960) have identified the fact that different sensory modalities are involved in learning. Ausubel (1965) and Bruner (1966) have suggested that a different type of learning is necessary for cognitive association, concept formation and receptor learning. Ausubel particularly has emphasized the need for what he calls advanced organizers or the cognitive scaffolding which allows for the systematic expansion of verbal concepts. The behavior modification school which has involved the experimental manipulation of children's behavior and specialized studies with hyperactive, autistic, tantrum behavior and phobic children, though generally limited to experimental units outside the schools, has provided considerable research evidence regarding the efficacy of such techniques (Grossman, 1964). Bandura and Walters (1963), though not again specifically addressing themselves to the classroom setting, and drawing heavily on social psychology, have indicated the strength of such social learning techniques as imitation, vicarious experiencing, modeling, and shaping of behavior. Skinner (1968) has also suggested that teachers could obtain far greater results if they could define the kinds of behaviors they wish to obtain. Hewett (1967), in the application of much of this research and working in the specific context of educationally handicapped children, has developed what he calls the engineered classroom in which the educational task-orientation learning system is broken down into seven stages or steps. These he conceives to be attention, response, order, exploration, social skill acquisition, mastery and achievement. He has found that children can be sequentially programmed through these stages, and thatin Point of fact it is extremely important that children learn the earlier stages before they proceed to the more advanced ones.

These research studies clearly point out that the concept of skill is a legitimate base for building a taxonomy of classroom learning. The school effort is specifically focused on the programming of a satisfactory rate of skill acquisition on the part of all children. These skills appear to be sequentially related to each other and differ within the concept of individual differences on the basis of structural endowment and learning contingencies.

The second area of research findings focuses on the question of learning contingencies. Given structural intactness, how can learning be augmented, corrected, controlled and enhanced? Research from the area of measurement of the environmental "press" provides another key to skill acquisition rate. Measurement of the environmental "press" has stemmed from an effort to determine more adequate predictors and criteria of effective collegiate behavior. The concept developed from the research studies of Pace and Stern (1958), Thistlethwaite (1960), Holland (1959, 1960, 1965, 1966), and Astin (1965). This concept has related to the measurement of the means whereby the environment shapes and molds the behavior of the individuals who live within it. Astin (1965) used an environmental assessment technique and a number of freshman input factors to compare 1,014 colleges and universities. The environmental assessment technique which he used consisted of a number of scales relating to school selectivity and orientations towards various vocational jobs. Though these studies were limited chiefly to the collegiate and university environment, the writer has extended some of the same methods to the secondary and elementary environment. In a series of studies (Barclay, 1966a, 1966b, 1966c, 1966d, 1967a, 1967b, 1968) the writer has systematically explored the nature of environmental "press" in the secondary and elementary curriculum. The studies by the writer have provided evidence that peer ratings and teacher thrust constitute the two major criterion sources of effective human behavior in the classroom. These studies corroborate the research of others such as Backman and Secord (1962), Backman, Secord and Pierce (1963) and Patterson (1967).

The Backman, Secord and Pierce studies provide evidence that changes in an individual behavioral repertory requires both support from peer dispensers of reinforcement and the elimination or alteration of the occasional and desultory reinforcer from maladaptive sources. They found that an individual will not eliminate a maladaptive form of behavior as long as there are others (high in his personal esteem) who continue to reinforce this aspect of his behavior in a positive manner. Patterson also found that children under therapy for behavior problems in the classroom are subjected to redoubled effort on the part of their peers to reinstate maladaptive behavior. Thus it would appear that any attempt to assess social behavior in the classroom must take into consideration the cultural criteria of effective behavior which are set and sustained by the peer group and the teacher, sometimes in conjunction with each other and more often in some opposition to each other.

What all of this research leads to is a definition of classroom learning in termsof differential rate of skill acquisition within a social context. The following statements may summarize what appears to emerge as the fundamental framework for describing classroom learning. This framework takes into consideration both the fundamental set of behavioral responses issued by the subjects of learning (skill acquisition), and the methods whereby such responses are augmented, controlled and developed.

1. Learning may be characterized in the classroom as differential skill acquisition subject to structural and environmental contingencies.
2. There is a hierarchy of skill acquisition extending from simple to complex manifestations.
3. Learning skills may be tentatively classified within the major categories of perceptual-motor skills, social skills, and cognitive concept-formation skills.
4. The rate of skill acquisition in the individual may be considered a dependent variable related functionally to structural endowment and environmental programming as independent variables.
5. Constructs such as attitudes, emotional states, affects and motivation are by-products of both interpersonal and environmental shaping and are related specifically to habits of skills acquired.
6. Classroom learning is task-oriented and systematically shaped by two major criterion sources (i. e. peers and teachers) who act as de facto agents of the cultural transmission.

This approach to classroom learning then is characterized by the view of classroom learning phenomena as: 1) a series of task-oriented skills, 2) requiring differential programming in relationship to structural limitations and goal-setting of criteria, 3) shaped and influenced by immediate criterion sources of effective behavior identified as primary change or influence agents in the learning process, i. e. peers, teachers and curriculum materials.

Non-Eclectic Base and Parsimony

The identification of basic classroom learning phenomena as skills avoids the dangers of a global construct leaning on intervening variables which tends to be difficult to assess or evaluate, and likewise avoids the tendency to atomistic reductionism so typical of the stimulus-response paradigm. Sufficient research evidence is available to establish the fact that a skill acquisition is the end product of a process of learning which obviously involves exercise and other learning principles. Viewed as a dependent variable related to structural determinants and environmental contingencies skill response provides a phenomenon sufficiently demarcated to make it easily identifiable and observable. Skill phenomena are distinguished by the following characteristics. They are empirically observable, i. e. can be measured in an objective manner; they are self-evident, i. e. not the product of an inferred, hypothetical or deductive intervening variable; they are comprehensive since they can be applied to all presently known learning phenomena, i. e. perceptual-motor, social, and cognitive-concept formation skills.

Considered within the framework of criterion sources which establish, maintain, and sustain specific behavioral responses within the classroom, the level of skill acquisition within the several basic categories of skills can be analyzed as either congruent or deficient in relationship to the criteria. In other words, whether John is progressing adequately in the classroom is a function of his acquisition of skills in the several categories in relationship to his structural ability and the shaping effect of the environmental contingencies. Disruptive acting-out behavior can be viewed as a deficiency in social skill development. A remedial strategy may entail the reduction of maladaptive social habits and their replacement by a new set of behaviors more congruent with the interim criteria of

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effective behavior. Possibly the analysis of his deficiencies may call for a strategy of reduction to more basic skill acquisition relating to attending and response skills. In this sense, then, the characteristics and classification of classroom learning phenomena conform to the principle of parsimony, i. e. the dictum that characteristics of phenomena and categorical classifications should be kept to a minimum, subject, in this instance, to observable, measurable empirical canons. Figure 2 illustrates these observations.

Figure 2

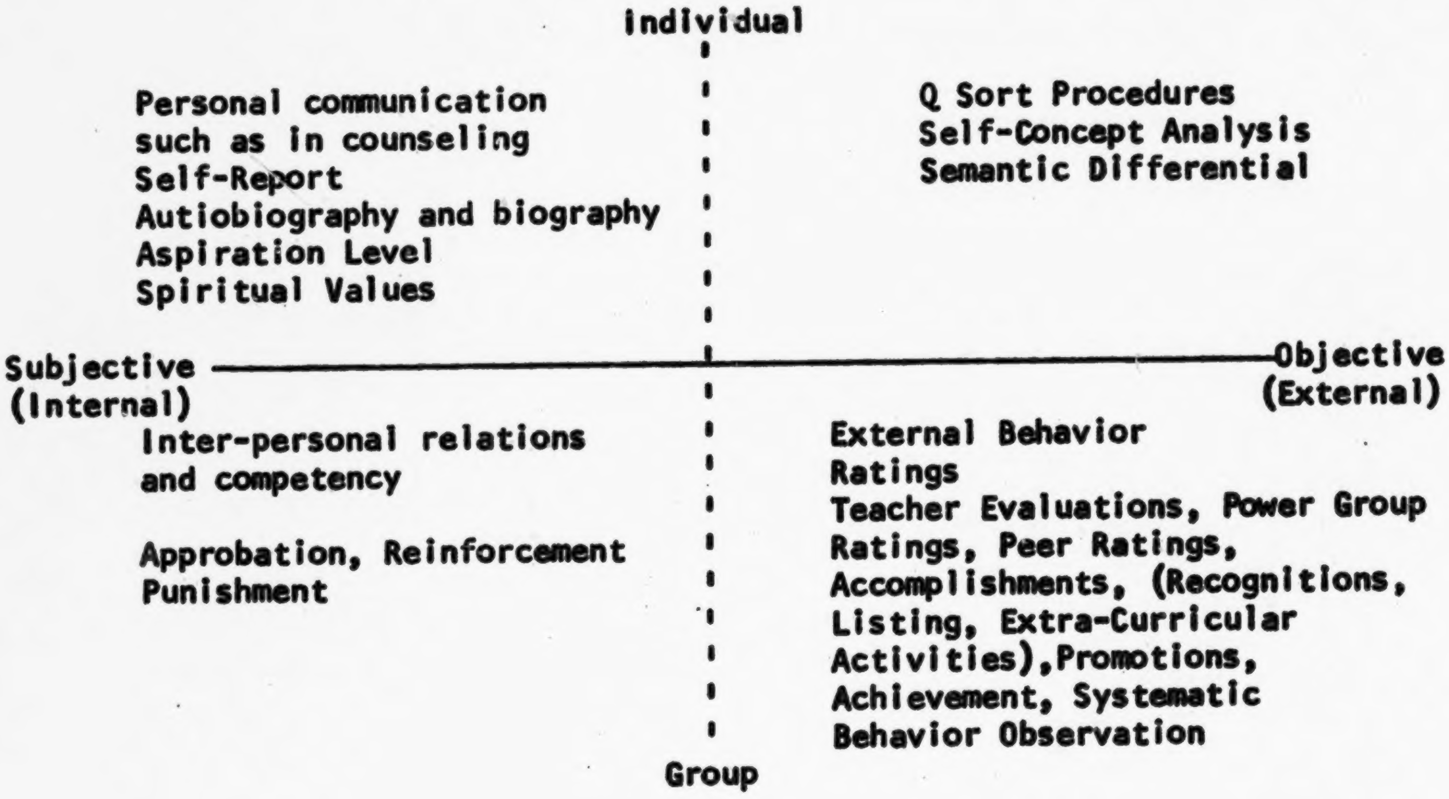
Characteristics and Classifications of Classroom Phenomena

Phenomenon	Characteristics	Criterion	Classification
Perceptual-Motor Skills	Empirically observed coordination and/or test data	Response level indicated	Approximation vs. Deficiency in rate acquisition
Social Skills	Empirically observed contingencies in responding, imitation, inter-personal skill acquisition, etc. Group Nominations and Teacher ratings	Contextual peer support and teacher approval plus self competency evaluation	Approximation vs. deficiency in rate acquisition
Cognitive Skills	Higher order empirical and test indications of integrative functioning in use and rate of acquisition of cognitive skills	Contextual peer support and teacher evaluation plus self competency evaluation	Approximation vs. Deficiency in rate acquisition and development

These characteristics and classifications of classroom phenomena must then be assessed within the context of criterion sources of effective human behavior. Figure 3 identifies alternate possible measures of such criterion sources (Barclay, 1968a, p. 72).

Figure 3

Criterion Sources of Effective Behavior Determination


Individual
Personal communication such as in counseling
Self-Report
Autiobiography and biography
Aspiration Level
Spiritual Values
Q Sort Procedures
Self-Concept Analysis
Semantic Differential
Subjective (Internal)
Objective (External)
Inter-personal relations and competency
Approbation, Reinforcement
Punishment
External Behavior Ratings
Teacher Evaluations, Power Group Ratings, Peer Ratings,
Accomplishments, (Recognitions, Listing, Extra-Curricular Activities),Promotions,
Achievement, Systematic Behavior Observation
Group

Power Potential for Assessment and Evaluation

When educational phenomena are classified into specific motor, social, and cognitive skills it is then possible to make an entirely different type of psychological diagnosis. The determination of what ought to be done regarding the specific learning problems of an individual child is then a function of a set of structural and environmental contingencies. A primary task of the psychologist is to determine first of all what constitutes the criteria of effective learning behavior in the classroom.[3] This may be obtained by some testing procedures and by observation.

Once the characteristics of the total group are known, then it is possible to make a judgment relating to the specific manner in which individuals either approximate the criteria or fail to approximate it. The understanding and evaluation of the criteria of effective behavior within the classroom is one of the first tasks of the psychologist whether he has systematic test information or must obtain this information from the teacher in a direct interview. For it is necessary to know what are the criteria of effective classroom behavior in a given situation before specific target behaviors can be identified for treatment purposes.

In the summer of 1967 Goodwin and Garvey with the assistance of Barclay and Catterall developed a step by step assessment and strategy planning procedure basically formulated in relationship to the identification and treatment of behavior disorders. These steps were primarily related to the problems associated with social skill development either in terms of deficiencies or maladaptive overlays. The following are the steps in the behavioral analysis as detailed by Dr. William Garvey in an AERA symposium (Barclay, Garvey and Goodwin, 1968). Garvey's succinct description of the steps are quoted here in entirety.

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[3] The writer is currently field testing an instrument which is specifically designed to ascertain through group testing methods the specific nature of the environmental "press" in a given classroom through the analysis of self-competency skills, group evaluation of specific skills perceived as acquired or not acquired, and the evaluation of teacher criteria in these several dimensions. The instrument is entitled the Classroom Vocational Interest Inventory.

"A) Assessment

1 Consideration of the problem behavior

a. Identification of target or problem behavior. In consulting with the teacher, the problem behavior is defined operationally. As often happens, the problem behavior is composed of many specific behaviors. For example, uncooperative behavior may mean that the child wanders around the room, makes loud remarks, throws erasers. Each of these is considered a specific behavior and dealt with separately.

b. Measurement of base rates for the target behavior or behaviors. Observation by the teacher and psychologist and frequency data are extremely useful for this purpose. This information shows clearly what is going on in the classroom and avoids false generalizations based on vague impressions.

c. Identification of the contingencies in the environment which are related to the problem behavior. The conditions under which the problem behavior occurs, the antecedent conditions, must be discovered. These are questions such as what, when, where, how, how long, how much and who. The consequent conditions must also be identified. What happens immediately after the problem behavior, and what effect do these consequents have?

d. Identification of the reinforcers and punishers. It must be recognized that not every consequent event is reinforcing. Because reinforcers and punishers are relative to the individual child, one must carefully inquire into what are his likes and dislikes. What is of interest to him, what is fun for him, etc? Two mistakes are often made at this point: One consists of assuming we know what the reinforcers are for the particular child, and the second is assuming that reinforcers are general. Believe it or not, there are some children who do not like M & Ms.

II Consideration of the terminal or desired behavior. How often does it occur, under what conditions does it occur, what happens afterwards? In other words, one goes through the same procedure in analyzing the terminal behaviors as one does for the target behaviors. This phase, although it yields important information, is often neglected. It is important because usually one attempts to increase the rate of the desirable behaviors and therefore the choice of the starting point is crucial. Often one finds that the desirable behaviors occur under certain antecedent conditions and not others, so that the problem becomes one of generalization. Occasionally, desirable behaviors do not occur at all, so that modeling and imitation take on special importance in the strategy phase.

B) Strategy Phase -

1 Planning of specific environmental changes designed to decrease

the rate of target behavior and increase the rate of the terminal behavior. The specific behavior modification strategies, based on the assessment phase, may now be chosen. Some of these strategies are:

a. modeling of terminal behavior

b. reinforcement and shaping of terminal behavior

c. time out and extinction of target behavior

d. reciprocal inhibition and desensitization of respondents.

C) Evaluation of behavior changes. Since one is dealing with clearly defined, observable behavior, it is possible to measure the changes in both the target behavior and terminal behavior against the earlier base rate figures. This provides a clear assessment of success or failure and does not depend on general impressions of persons in the child's environment or on self report or inferences about internal states.

It should be noted that in the strategy phase it is best to attempt to modify only one or two behaviors at a time and when desired changes have occurred, then to go on to other behaviors. This is contrary to the more general psychological practice of trying to change a whole array of behaviors at once. When the teacher or parent, however, works on 1 or 2 behaviors, the task becomes easier because it is focused very specifically, and in the long run, the task of helping the child emit more adaptive responses is, I believe, more effective. Usually, what happens is that as the child is reinforced more frequently, he begins to feel more successful

> and gains confidence in himself. As this happens, the child emits other problem behaviors less frequently (we used to call this 'spontaneous remission') through the process of generalization, so that it is usually not necessary to go through a long list of behaviors to be modified."

The task of the psychologist in a social learning frame of reference is first to assess the characteristics of the environment and the specific contingencies maintained by that environment. Subsequently, he must ascertain through teacher interview and actual observation what are the specific problems which the teacher has identified. These problem behaviors represent some kind of skill acquisition or deficit. Within this skill framework it is then imperative to obtain basal rates of behavior which can be related to the target behavior or skill desired and specific contingencies which are to be altered. We have suggested to psychologists that they utilize what we have termed an A B C paradigm -

A = antecedents
B = behavior viewed as skills or lack thereof
C = consequences

We ask teachers to order the behavioral problems which most concern them in regard to their referral child. Choosing from the array of problems mentioned, we single out one problem which seems most disturbing to the teacher. Then we look for her description of the immediate antecedents of the behavior and the "payoff" consequences. If, for example, a child is belching out loud in class we would seek to find out exactly when this occurs, what antecedents, if any, may be recalled, and what are both the teacher's and students' reactions. Essentially, there are two goals in mind during this initial teacher interview: 1) an explanation to the teacher that she and the students, not the school psychologists, are the essential change agents or criterion sources in a social setting, and 2) eliciting her cooperation in determining a rough basal approximation of the behavior.

The focus in this inquiry is on the answers to WHAT, WHERE, WHEN, HOW OFTEN, HOW LONG, AND WHO rather than the traditional question WHY. Most of traditional school psychology practice has focused on the search for answers or hypotheses about the origin and causality of deviant behavior. Because of the multiple causes of behavior, the long environmental and hereditary interactions which lead to behavioral patterns, it is decidedly not worth the effort of time and involvement to seek out possible alternative theories regarding the specific individual configuration of causal factors which have led to a particular behavior. A search for direct causal factors which could be said to determine specific skill acquisitions is analogous to the attempt to interpret multiple treatment and interactive effects in a complex factorial design. One may theorize about causal relationships, but no direct validating criterion is available. Moreover, the argument that precedence is causally related to consequents (post hoc ergo propter hoc) has been long known to be a specious and illogical argument.

This is not to state that ultimately one does not obtain some information and understanding about possible origins of deviant behavior, but rather to state that our primary emphasis in school psychology practice as described in this model is to focus on skill acquisition and to reduce maladaptive behavior or elicit appropriate behavior generally consonant with skill acquisition. Using the techniques and steps discussed by Garvey the school psychologist makes an assessment of the situation based primarily on observation and review of the learning contingencies.

It might be asked at this point what is the role of testing in this model of school psychology practice? The answer to this question is that it is comparatively limited. Testing in its original intent and purpose was to provide an objective method of sampling the behavior of individuals in relationship to group norms. Most of the testing instruments used in the school psychologist's repertory today are not in all cases relevant. In other words, the social learning model of school psychology practice does not deny the utility of such tests as intelligence testing, or differential skills evaluation in terms of achievement etc., but suggests that these tests be used as specific ancillary techniques to be used where basic intelligence is in question, or specific areas of inquiry might be relevant, i. e. investigating perceptual-motor skills, sensory modalities, etc. For the most part, personality and interest tests make assumptions about the constancy of behavior and theoretical dimensions which are not directly related to the empirical base of this approach to school psychology. If and when psychodynamic tests of personality can be shown to have behavioral correlates observable in the empirical domain, these tests may then be more relevant to school psychology practice. In short then, testing in the social learning model is used where it may provide helpful supplementary information for assessment or strategy making.

Once all of the assessment data and target behaviors or skills are identified, the psychologist in conjunction with the teacher plans a strategy of approach. This requires, especially at first, some teaching of new methods of control to teachers. Teachers have to learn methods of reinforcement, the use of shaping techniques, modeling, time-out moratoriums, and a variety of other procedures. Ordinarily this means that the school psychologist will serve as a learning consultant. The strategy which will be worked out will be functionally arrived at through a teacher-psychologist case conference. In many instances parental counseling and involvement, the use of para-professionals such as teacher aides, etc., will also be planned. Of evident importance is the provision of adequate administrative support.

The specific decisions regarding alternate strategies of approach requires a continued program of research evaluation. Mention has been made in the first chapter of a set of prescriptive interventions identified by Catterall (1967). These interventions generally encompass environmental interventions, installed interventions, assigned interventions and transactional interventions. Though helpful as they now are reported, and possibly the most sophisticated approach at the present time, they were not originally geared to the specific development of skills, though the majority lend themselves to this interpretation.

After a course of strategy or intervention format has been detailed, it is more likely that the strategy can be effectively measured since it has included the careful observation and obtaining of a basal rate of behavior or skill acquisition prior to the starting of the intervention program. This allows for an objective evaluation of the impact and power potential of the entire assessment-strategy-intervention format. To this extent, the model in a manner much more rigorous than any other approach to school psychology phenomena possesses the power potential for evaluating specific change and modifying its own scientific development through the systematic monitoring effect of pre and post treatment change.

Philosophical Soundness and Scientific Compatability

Any system or model which is to be implemented in the public schools must be philosophically consonant with the philosophy of the public school. The social learning model is based on a scientific realism as a philosophical base. This means simply that phenomena are epistemologically tied to an empirical base. In the thesis of classical realism, it is stated that classroom learning phenomena may be known in part as they really are and in part are not known to us. Unquestionaly the nature of psychic phenomena, the role of intentional perception and motivation, do play a significant role in the direction of human behavior. But most of the evidence thus far amassed supports the contention that perception itself is shaped and subjectively ensconsed with meaning as a product of its structural-environmental interaction. Thus we may know the results of learning as a three-fold skill acquisition developmentally progressing throughout the public school years. Epistemologically, we base our model on empirical data, avoiding the atomistic limitation of concentrating solely on sensory responses, and at the same time eschewing the tendency to hypothesize about intervening variables such as anxiety, etc.

From an ontological point of view realism states that what we observe about us in terms of the scientific development of laws and principles constitutes the immediate grounds of reality. On the other hand, it does not deny the importance or the relevance of that vast other world of subjective phenomena characterized as the Lebenswelt. The immediate testimony to this principle is found in the manner in which the social learning model is implemented. For without concern for teachers' attitudes and needs, the model itself cannot be implemented. Ultimately, realism would provide the philosophical basis for an exploration into those subjective grounds of experience which may not yet be accessible to direct scientific methodology.

Social learning theory in itself as a method of attack and scientific approach to school learning phenomena does not provide the explicit criteria of school learning goals. It is a method and technique which can be used to implement a number of possible goals in learning. But in view of the accent on skill phenomena, the technique itself should provide ample range of method to cope with the specific problems of disadvantaged and other educational problems. For the development of differential emphases on certain skills over others may be necessary for coping with certain segments of the population.

What may not be completely recognized at this point are the implications of this model for education in general. For logically, if the basic phenomena of classroom learning may be considered the acquisition of skills, then curriculum methods, goals, and processes should be logically related to these skill acquisitions. Further still, the training of teachers, school psychologists and other ancillary personnel such as elementary and secondary counselors, speech correctionists, etc. could be geared to this model.

Theoretically, in this model the school psychologist emerges as a chief learning consultant, a general, if you will, deploying the resources of the school most effectively to yield maximum learning. The elementary counselor can be considered as a specialist detailing and guiding the use of learning principles and strategies within a given school or two, not on a therapy model, but on a direct curriculum intervention basis working[4] with groups of children rather than emphasizing individual counseling. A definition and elaboration of secondary goals in terms of personality skills related to job characteristics might result in a different role for the secondary counselor focusing on the development of terminal social and cognitive skills needed for success in the world of work and higher education. The teacher emerges as a specialist in curriculum determination and presentation. Her specific task is to arrange the environmental contingencies in such a way that skill acquisition is facilitated. Finally, if such a model is to be implemented it will require the help of paraprofessionals who can be taught to aid both teacher and elementary counselor in the implementing of a set of curriculum and reinforcement procedures optimally designed to develop specific skills.

Summary and Conclusions

The establishment of a more efficient model of school psychology practice is essentially a task of determining how school psychology can function in a scientific manner. This requires, as in any science, the determination of a set of basic phenomena which will provide the basis for scientific investigation. It has been the argument of this study that school psychology has been variously influenced by a host of educational and psychology theories essentially divorced from the mainstream of scientific investigation. For many reasons, educators and psychologists have felt that human learning phenomena are too complex to be immediately susceptible to the scientific method. As a result, it has been nearly impossible to determine objectively just how efficient school psychologists are.

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[4] The Palo Alto, California schools have recently detailed such a model for elementary counseling (Elementary School Guidance: A New Approach, Kenneth Sanner and Rosemarie K. Moore, Palo Alto Public Schools, 1967).

The chief criticism of all methods of school psychology practice must lie in the failure to have determined extrinsic viable criteria of performance. Though subjective notions of change and development may be incorporated into such evaluations, ultimately all men are judged by criteria of effective human behavior which exist outside of their own person. A science cannot develop without clearly defined objective criteria of performance. The argument of this study is ultimately related to criterion determination. The clinical, neurological, self-concept, and eclectic-consultation models in school psychology have unquestionably effected some change or impact on the lives of many thousands of teachers and children. If we are satisfied with the operation of school psychology as an art wherein school psychologists act as somewhat mysterious generalists focusing now on this problem, now on that problem, then school psychology functions and roles and training programs might well continue to emphasize the eclectic-consultation model. If, however, the establishment of a science of school psychology practice is the order of the day, then whether one agrees with the social learning model or not, a more precise definition of behavioral phenomena, goals, methods, processes, and specified criteria of performance are called for. Logically and scientifically, social learning theory as detailed in this study meets those requirements.

CHAPTER III

DESIGN AND INSTRUMENTATION OF THE STUDY

The overall purpose of the research aspect of this institute was to determine whether existing school psychologists could be re-trained to be more effective communicators in their school psychology practice. In addition, the broader question of can behavior be changed through a short-term intensive training session was considered.

For both major questions, it was necessary to consider not only the specific goals of the institute, but to determine the methods of reaching these goals through a variety of instructional media, to select criteria for judging approximation, and to develop an instrumentation which would tap various dimensions of behavior both cognitive and behavioral. Thus the tasks of this institute were formidable if the goals were to be reached.

Planning and Development

The institute proposal was planned and written by the writer during the fall of 1966. Dr. Dwight L. Goodwin and Dr. Calvin D. Catterall both were appraised of the progress of the institute proposal and contributed some helpful suggestions. One of the unique features of the institute, i. e. the use of closed-circuit television, was initially suggested by Mrs. Lisa K. Barclay and developed subsequently by the staff.

When approval for the institute was granted, planning began in earnest for the implementation of the institute. A descriptive brochure was sent out: 1) within the State of California to all members of the California Association of School Psychologists and School Psychometrists,

2) to all guidance administrators, 3) to all state guidance offices, 4) to university and college training programs in school psychology throughout the nation, and 5) to all interested inquirers. Some 2,000 inquiries were received and brochures forwarded to them. Subsequently, some 715 applications were sent out and 191 were returned partially or totally completed.

Eligibility Qualifications

Thirty qualified and eligible applicants were to be selected for the institute. The specific criteria which were utilized in the selection of the participants were based on educational, occupational, and personal requirements. The educational criteria were as follows: participants were to possess a master's degree or equivalent work from an accredited college or university. This degree or work was to have been in the specific field of counseling or psychology or a closely related field in which the major emphasis was unquestionably psychological in nature. The participant was to have demonstrated competence in the area of school psychology by the holding of a certificate or credential in the areas of school psychometry and/or school psychology or equivalent. These provisions were somewhat flexible because of differential qualifications for school psychology in the several states. The occupational criteria stated that the participants should be currently employed as a psychometrist, school psychologist or equivalent. At least part of their full-time work was to have been with elementary school children and teachers. In addition, there was to be a reasonable expectation of their continuance in this type of work over the year following the institute. The personal criteria were ascertained by asking the individual applicant to have two recommendation forms sent to the office of the institute directly from two professionals who knew him well. One of these was to be a superior or administrator, and the other was to be filled out by a colleague. Applicants also filled out a brief personal statement form in which they expressed their motivation for attending this institute.

One other qualification which was not held to as a screening device was a willingness to return for a second institute in the summer of 1968. Though not guaranteed in the original funding of the Institute for 1967, the initial plan of action called for a two-part institute which would take place during the summers of 1967 and 1968. This second institute proposal was funded and is currently under way at the writing of this report.

Selection Procedures

The following procedures were utilized in the selection of the participants for the institute. In the initial packet of materials to applicants these materials were sent: 1) the regulation U. S. Office forms together with two recommendation forms, 2) a questionnaire relating to school psychology practice, training and background together with a time allocation form. These two items were used to ascertain whether the applicant was trained and functioning as a school psychologist. 3) A personal statement relating to expectations for the institute if chose. Each applicant was also asked to send copies of his undergraduate and graduate transcripts.

On receipt of these materials and the verification that an applicant was really functioning and trained as a school psychologist a second packet of materials was mailed to those who appeared to be qualified and eligible. These were four questionnaire-type instruments identified as: 1) a concept check-list which related to the usefulness of various terms and concepts used in school psychology, 2) a psychological practices questionnaire which called for priority rankings of 14 questions relating to alternate methods of assessment of individuals and strategies of remediation, 3) a theoretical orientation instrument which sought identification of the theoretical frames of reference favored by the school psychologist and 4) a school psychology practices rating scale which asked for the ranking of priorities of various kinds of school psychology functions. These forms were mailed to each applicant. One was to be filled out by the school psychologist and the other by two teachers with whom he worked.[1]

Each applicant who received the second mailing was notified that completion and return of these materials were not mandatory for being chosen in the institute. The applicants were informed that these materials were being used both as curriculum planning guides and research instruments.

After the closing of applications on April 1, 1967, a randomized procedure was used to pick the participants. The following is the procedure as used:

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[1] The complete packet of application materials,both the first and second mailing are included in Appendix 1.

1. The director determined the number of total applicants who were qualified and eligible for the institute based on their initial packet of application materials. One hundred and nine individuals met these criteria.

2. This pool of applicants was then divided into frequencies and percentages of applications obtained from each section of the nation, using the following political sub-divisions:

    A. California
    B. Other Western States including Washington, Oregon, Idaho, Montana, Utah, Arizona and Nevada
    C. Rocky Mountain and Plains States including North Dakota, South Dakota, Nebraska, Kansas, Wyoming and Colorado
    D. Southwestern States including New Mexico, Texas, Oklahoma
    E. Mid-western States including Minnesota, Wisconsin, Iowa, Illinois, Michigan, Missouri, Indiana and Ohio
    F. Southern States including Kentucky, Tennessee, Arkansas, Mississippi, Alabama, Georgia, Louisiana, Florida, South Carolina, North Carolina and Virginia
    G. North Central States including West Virginia, Maryland, Washington, D. C., Pennsylvania, Delaware, New Jersey and New York
    H. New England States including New Hampshire, Maine, Vermont, Massachusetts, Connecticut and Rhode Island
    I. Other states and territories including Alaska, Hawaii, Puerto Rico and various other territories

Subsequently, a random selection and assignment was made to: 1) participant status, 2) control status, and 3) alternate status. The per cent of applications from a given area governed the selection of the numbers of applicants from a particular region. In this manner the participants were chosen and notified. Three individuals selected could not attend and their corresponding alternate was offered the position. Generally speaking, the distribution of applications fell into two major categories; approximately half were from California and approximately half from the rest of the nation.

Planning of the Institute

Though the institute proposal had detailed the rationale, coursework, and evaluation procedures to be used in the institute, the translation of this document into a viable plan of action for the institute was the work of a team of individuals who constituted the staff. The staff met both as individuals and in a three-day planning session. Dr. Dwight L. Goodwin and the director spent considerable time, the equivalent of three or four weeks of full-time concentrated work, in planning the sequential development of the institute. Transcripts of these meetings would fill an entire volume. Mr. Stephen A. Goodman, the graduate assistant and administrative assistant to the director, likewise spent many hours of hard work assisting the director and Dr. Goodwin in numerous activities. Dr. Goodwin and Mr. Goodman filmed sequences of children in various schools during the entire Spring of 1967. Fifteen or twenty hours of video taped sequences were thus accumulated.

But the major contribution to planning took place in late April, 1967 at a three day retreat at Carmel Valley. During this period of time, Dr. William Garvey, Dr. Calvin D. Catterall, Dr. Dwight L. Goodwin and the director met for many long and intensive sessions. The general purpose of this meeting was to develop a week by week planning guide for the institute. It was recognized by all concerned that if the specification of assessment objectives and strategy procedures were important to school psychologists, we as a staff would need to carefully plan each phase of the curriculum development in the institute. The following week by week goals were planned. In addition, a daily schedule

Figure 1
GOALS AND METHODS OF THE INSTITUTE WEEK BY WEEK

Week	Goals	Methods	Consultants and/or Field Experience
1. June 19-23	1. Overview of Learning Theory 2. Introduction to Culture 3. Introduction to Social Learning 4. Introduction to Micro-Consulting 5. Understanding of format of institute	1. Lectures and didactic instruction 2. Participation in video taping and observation of models 3. Small group discussions 4. School Psychology Seminar	Intensive initial video taping experience for each participant
2. June 26-30	1. Understanding of basic fundamentals of social learning theory 2. Understanding of observational methods for conducting a behavioral analysis and assessing the environmental press 3. Technical understanding of what to look for in video models and in a live situation	1. Intensive didactic instruction in the fundamentals of social learning, and assessment dimensions of classroom environment such as teacher press, student reactions, and new methods of instrumentation 2. Simulated and real practice in conducting behavioral observations	Visit to Job Corps for Behavior Rating Experience
3. July 5-8	1. Review of basic learning and social learning theory 2. Conducting a behavioral analysis in the school setting. Observation techniques and written reports 3. Introduction to strategies of intervention	1. Didactic instruction and review 2. Practice in a school setting 3. Contribution of Dr. Krumboltz	Field Observation in schools Dr. John Krumboltz, Stanford University "Changing the Behavior of the Behavior Changers"
4. July 10-14	1. The development of alternative strategies of intervention 2. The theory and application of social behavioral learning and environmental press to the family 3. The application of social learning theory to the curriculum	1. Didactic instruction and review 2. Interviewing of teachers in the field 3. Contribution of Dr. Patterson	Field interviewing of teachers Dr. Gerald Patterson "Social Learning Applied to Assessment and the Family"

was developed, but for purposes of overview, only the week goals will be detailed here.

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During these three days additional research methodology and specific methods of evaluation and follow-up were detailed by the group. The overview of the weekly goals and methods used in the institute were then broken down into specific day by day contributions.

The writer wishes at this point to emphasize and commend the other members of the staff for their contribution to the planning of the institute. Dr. Dwight L. Goodwin who served as associate director of the institute provided a continual series of ideas for implementing various goals. Dr. William Garvey was most valuable in determining the specific inputs of various learning techniques. Dr. Calvin D. Catterall provided a wealth of background information and organizational techniques which made it possible to finalize many of the planned techniques. In a very real sense the contribution of these staff members, the ease of association which took place both within the planning sessions and the institute itself is a genuine testimony of how such a program can be organized by a group of dedicated professionals.

Formal Instructional Procedures

The institute itself consisted of a formal set of courses which were taught in regular meetings. In addition, there was a considerable amount of seminar activity, laboratory experiences with television both in the College setting and out in the field, and the contribution of special consultants. The courses and their descriptions are as follows:

6906	Social Behavioral Learning	3 credits
	A consideration of current research relating to social behavioral learning theory as applied to school psychology.	

6903	Appraisal of Social Interaction	3 credits
	A research approach to the appraisal of variables of personality and environmental press including specific instruments such as sociometric techniques, classroom behavior evaluation schedules, etc.	
6904	Seminar in School Psychology	2 credits
	A Problem-Centered approach to the practice of school psychology centering on a number of specific areas such as the writing of reports, the in-service training of teachers and interns, the implementation of strategies of learning, and research methodology.	
6905	Practicum in Social-Behavioral Learning Techniques	4 credits
	A practical learning-oriented sequence of instruction and learning utilizing video-tape techniques and group discussions.	

Dr. Catterall and the writer shared the instructional load in the Appraisal of Social Interaction, and Dr. Goodwin and Dr. Garvey instructed in Social Behavioral Learning. Dr. Barclay took responsibility for the Seminar in School Psychology and each of the other staff had ten students in the practicum assignment. They met with these ten students in small group sessions twice a week in addition to the regular instruction.

Design and Instrumentation of the Institute

As has been indicated earlier the institute itself was considered a gross independent variable for purposes of research. The dependent variables were the paper-pencil measures obtained at the end of the institute on the participants, plus their video taping sequence (hereafter referred to as the post-institute video taping) and the audio taping (hereafter referred to as the field testing).

Figure 2 provides a summary of predictor and criteria variables obtained prior to, during, and subsequent to the institute. Figure 3 provides a summary of the overall design of the institute.

Figure 2
SUMMARY OF PREDICTORS AND CRITERIA N. D. E. A. SCHOOL PSYCHOLOGY INSTITUTE

Pre-Institute Measures and Predictors	Institute Measures During the Institute	Post-Institute Measures and Criteria
A Demographic & Characteristics Questionnaire	L Mid-term Evaluation (Enrollees)	* C' Time Analysis Form
B Professional Ratings	M End of Institute Evaluation (Enrollees)	* D Psychological Practices Questionnaire
*C Time Analysis Form	N Final Examination Appraisal of Social Interaction Course	* E Theoretical Orientation
*D Psychological Practices Questionnaire	O Final Examination Social-Behavioral Learning Course	* F Concept Check List
*E Theoretical Orientation	P Holland's Vocational Interest Inventory	* G Psychologists' School Practices Inventory
*F Concept Check List	Q Initial Video Taping of Appraisal Interview	* H Teachers' School Practice Inventory (2 teachers)
*G Psychologist's School Practices Inventory	R Final Video Taping of Appraisal Interview	* I Audio Tape Recording of 15 minute interview in psychologist's school district (Behavior Ratings)
*H Teachers' School Practices Inventory (two teachers)	S Adjective Check List Decision-Making Study	* J Summary of Contacts Form
		* K Clinical Judgment of Staff in interviewing district administrators and other contacts.

NOTE: Pre-institute measures were obtained for all applicants who were judged to be qualified and eligible for the institute.

* Denotes measures obtained pre- and post institute on enrollees and control groups.

Figure 3

OVERALL DESIGN

Pre-Institute Data	Independent Variables	Dependent Variables
Enrollees N = 30	Institute itself A. Televising Experience B. Didactic C. Group Critiquing D. Micro-Consultation	Measurement Variables C, D, E, F, G, H, I, J
Control A N = 12	No Contact	Measurement Variables C, D, E, F, G, H, I, J
Control B N = 9	Televising Experience in two one-day workshops held in the fall	Measurement Variables C, D, E, F, G, H, I, J
Other Qualified N = 61		

NOTE: Data analysis was effected by a variety of techniques. The chief treatment analysis paradigm was related to analysis of variance and covariance where the three groups, i. e. experimental, control A and control B were compared on various measurement variables.

Figure 3 presents the overall design of the institute with the numbers of individuals in each treatment group who were included for research purposes. In regard to the control groups it should be explained here that originally there were 30 individuals in the control group. However, not all of the controls were willing to participate in the follow-up procedure. Even though a small research grant was obtained to finance the evaluation of the controls, and a stipend was offered them for their cooperation, some were simply unwilling to cooperate on the basis of the fact that they were not originally selected. Many school psychologists who applied did not really believe that the selection to the institute was done on a random basis as they were advised in the application materials. Other individuals who were in the control group had not completed all of the initial testing materials included in the second packet. As a result, the group designated as Control A represents the number of individuals originally allocated to control status who were located around the nation and were willing to have a member of the institute staff visit them for assessment and evaluation purposes. Control B represents control individuals in the immediate vicinity of the Bay Area who were invited to attend two one-day workshops held in November and December, 1967. The purpose of this control group experience was to expose them to the video-taping sequence of activities without any formal instruction in the social learning procedures. This was deemed important to ascertain in the final analysis what the possible effect of our video-taping technology might be in relationship to outcomes.

Figure 4 lists the various variables obtained in the process of the data collection. A brief explanation is provided at this point regarding the nature of these variables. A more detailed analysis of individual instruments will be made as the results are reported.

Figure 4

EXPLANATION OF PREDICTOR AND CRITERION VARIABLES

A. Demographic and Characteristics Questionnaire

A three page questionnaire yielding information about years of experience in various roles, characteristics of the community, credentials, qualifications, courses taken, time spent in various activities and grade-point obtained in undergraduate and graduate work.

B. Professional Ratings

NDEA requirement rating psychologist as 1) specialist, 2) knowledge of subject matter, 3) effectiveness in working with students, 4) effectiveness in working with colleagues, 5) leadership potential, and 6) scholastic capacity for growth. Scored on a five-point scale.

C. Time Analysis Form

An institute devised form requesting frequency data relating to: 1) referrals obtained during the months of February, 1967 and October, 1967, 2) number of cases tested, 3) number of reports written, 4) number of individual and group counseling sessions, 5) number of conferences with various categories of school personnel, 6) number of research activities.

D. Psychological Practices Questionnaire

A 14 item questionnaire based on a rationale provided by J. R. Barclay. This questionnaire has seven items relating to diagnosis or decision-making and seven items relating to strategy formation. Each question poses a situation with four alternatives. One is a clinical alternative, the second a phenomenological or self-concept alternative, the third a behavioral alternative, and the fourth a filler or eclectic alternative. Subjects were asked to rank in priority of their judgment. The questionnaire results in nine scores, three relating to diagnosis (clinical, self-concept, and behavioral) and three relating to treatment. Summary scores for both diagnosis and treatment sub-sections are totalled for three final scores.

E. Theoretical Orientation

A questionnaire type instrument requesting a definition of theoretical orientation (first, second, and third choices) in relationship to 12 specific theoretical positions. The theoretical positions can be broadly subsumed into triads, i. e. phenomenological, clinical, and behavioral. The rationale of the orientations is based on an epistemological approach to psychological intervention as being determined by the psychologist's perception of his position on a bi-polar continuum reflected by axes of objectivity versus subjectivity, and a-priori structure versus a-posteriori structure. The instrument and its description is described theoretically in Philosophy and Counseling: A Theoretical Exposition, by James R. Barclay, Houghton-Mifflin, Spring, 1968. The questionnaire requests: 1) that the subject indicate his orientation at the completion of graduate training and at present, 2) that he specify the orientation of his major influential professors, and 3) that he specify the orientation of his school psychologist colleagues.

F. Concept Check List

A check list of theoretical concepts used in various theories of personality and counseling devised in accordance with the rationale mentioned in D and E. There are 18 clinical concepts, 17 phenomenological or self-concept concepts, and 16 behavioral concepts. Concepts are rated in accordance to usefulness in school psychology practice on a four point scale.

G. Psychologist's School Practices Inventory

An Institute devised questionnaire asking for ratings on 39 statements which are related to: 1) services to the individual student, 2) services to the school as a whole, 3) services in research, and 4) services to the community. Each item is rated on the realistic dimension of actual practice, and the idealized dimension of wished-for level of practice. Ratings on a four point scale are requested with the result that eight totals are obtained, four realistic and four idealistic relating to school psychology practice.

H. Teachers' School Practices Inventory

This is the same instrument as G but filled out by two local teachers who have worked with the school psychologist.

I. Audio Tape Recording and Behavioral Analysis

This was a fifteen minute audio tape recording of a psychologist interviewing a teacher about an initial referral. A form was devised defining 20 psychologist behaviors in interviewing. Three major categories were determined: 1) structure in relationship to explaining the task-orientation of the interview, 2) assessment in terms of behavior definition, establishment of antecedent and consequent conditions, and 3) strategy formation in relationship to planning for intervention or behavior change. Each tape recording was analyzed by a graduate student who had been specifically trained to evaluate the categories and interpret psychologist behaviors in relationship to the categories. Training of graduate students included considerable practice and inter-student reliabilities of upwards of .80.

J. Summary of Contacts Form

A list of 50 subjects including both behavioral, clinical, and phenomenological topics which was distributed to enrollees and controls after the Institute. Contacts were categorized by administrators, parents, teachers, other psychologists and counselors, etc. The task orientation was to list a frequency of contacts regarding these possible subjects. The time period was from the beginning of the fall semester 1967 until the visitation (October, November, 1967).

K. Clinical Judgment

Summary of impressions by staff members in visitations. Unanalyzed at present.

L.M. Mid-Term and Final Enrollee Evaluations

Evaluation forms filled out by enrollees at the mid-point and termination of the institute. Approximately 25 items to be rated on a five-point scale. Time spent in preparation, group contacts, etc. was also obtained.

N.O. Final Examinations

Two final examinations of a structured essay type yielding a perfect score of 100. The first (N) was devised and scored by Drs. Catterall and Barclay in conjunction with the course Appraisal of Social Interaction. The second was devised and scored by Drs. Goodwin and Garvey in conjunction with the course Social-Behavioral Learning.

P. Holland's Vocational Interest Inventory

A list of approximately 250 occupational titles which yields personality scores relating to "environmental press". Eleven scores i. e. realistic, intellectual, social, conventional, enterprising, artistic, self-control, masculinity, status, infrequency, and acquiescence are obtained. This was administered only to the enrollees.

Q.R. Initial and Final Video Taping

Enrollees were video-taped in a fifteen minute interview with a teacher on the second and third days of the institute. The same procedure was followed in the last week of the institute. Both cases presented were relating to acting-out disruptive behavior problems in the class. Three teachers were trained in the details of the case. Video tapes were analyzed on the same rating form described in I. Basal rates of psychologist's behavior in an interview situation were thus obtained from the initial filming and final rates subsequent to training.

S. Adjective Check List Decision-Making Study

A separate study within the format of the institute relating to decision-making and information. Enrollees were asked to check adjectives (drawn from Gough's Adjective Check List) to describe their impressions of a child. They were asked to do this five times as additional information was presented: 1) on reading the initial referral, 2) on viewing an initial interview between psychologist and teacher, 3) on observation of class behavior and playground behavior, 4) on report of testing data, and 4) as a terminal overall evaluation. This sub-study has not yet been analyzed.

Summary

Approximately 130 correlational variables were obtained on enrollees.
Approximately 90 correlational variables were obtained on most of the applicants.
Approximately 70 frequency and descriptive data items were obtained on enrollees and applicants.

Note:

Obviously, data is not available for each variable on each applicant. Generally, the maxium number of individuals ranges from 112 to 90. Data pertaining to the follow-up is available on the 30 enrollees and 16 controls.

Criteria

One major problem relating both to the design of the institute and the implementation of the procedures was the determination of what constitutes an adequate and effective criterion or criteria of school psychology practice. More specifically, it was necessary to find criteria to measure the effects of this institute which though perhaps not ideal were sufficiently rigorous and independent to allow for an objective evaluation of the treatment procedures.

Ultimately, the criteria of good school psychology practice must be related to the consumers. In other words, the judgment of whether a school psychologist is functioning in an effective manner is related to the judgments made by teachers and school administrative personnel. Very often the judgment is made on purely impressionistic terms relating to the stimulus value of the school psychologist's personality. This is very often the case where there are no clearly cut criteria established for school psychology practice. Some schools, as was observed in the follow-up procedures, judge the efficacy of the school psychologist on the basis of the number of tests he comples and reports written. A good school psychologist is one who can test and write up two or more individual reports a day. This lamentable state of affairs certainly has encouraged the role of the school psychologist as a test jockey.

As in other social organizations, certainly the administrative approbation is a viable criterion of performance. This would suggest that a good school psychologist conforms to the expectations of his superiors in whatever way they deem important. Thus, school psychologists are obviously shaped by the environmental "press" and the contingencies of their job position as are other school personnel.

Since the purpose of this institute was to train school psychologists to be more effective communicators and within this role to teach them to develop skills in behavioral assessment and strategy making, it is reasonable then to set as one criterion of effective training demonstrated skill in assessment and strategy formation with teachers. To this end video-tapes were made of psychologist-teacher interviews at the very beginning of the institute and at the very end of the institute. In the first instance, psychologists were given a referral relating to an acting out child. They had ten minutes to study this referral and were then televised for fifteen minutes talking to a teacher regarding this referral. Subsequently, they were able to review their tape and analyze their approach. This initial procedure was undertaken on the second day of the institute before any formal instruction had taken place. A similar procedure was completed in the last week of the institute. And an audio tape in their home situation was obtained of another psychologist-teacher interview during the follow-up procedures. Thus, the basic criterion of this institute was a behavioral one focusing on the efficiency of psychologist assessment and strategy making in teacher interviews.

A study of the assessment and strategy making procedures was made by Drs. Goodwin and Garvey and as a result a format for the evaluation of psychologist's behaviors was determined. The categories identified by study are indicated in Figure 5. Video-tape interviews and audio interviews were evaluated in terms of the frequency of psychologist responses falling into various approaches to strategy making and assessment procedures. Three graduate students at California State College at Hayward

Figure 5

BEHAVIORAL INTERVIEW RATING

The following descriptions are abbreviated from those used in rating the audio and video tapes. Although these categories are written as statements, a distinction was made in the evaluation as to whether the psychologist response was a question or a statement. A comparison of differences between groups with respect to frequency of direct statements and use of non-verbal cues is planned for a later analysis. These behavioral ratings referred only to psychologist responses. The numbers below refer to numbers in the ANOVA table.

Interview Structure

1. Explains the procedures for using the behavioral analysis with respect to responsibilities, roles, assessment, etc.
2. Assists teacher in deciding on a target problem behavior.
3. Establishes and maintains rapport by clarifying , restating, expressing interest, emphasizing etc.

Environmental Assessment

4. Behavioral definitions: asks for definitions of target behavior in terms of frequency and duration.
5. Antecedents: asks about conditions under which behavior occurs: when, where, what , etc.
6. Consequents: asks about conditions following the target behavior, when, where, who, etc.
7. Reinforcers: asks about events serving as positive and negative reinforcers for this pupil
8. Intervening Variables : asks about inner steps, such as attitude, personality structure, feelings, concerns, etc.
9. Demographic data: asks for information regarding test results, family background, educational history, etc.
10. Dynamic interpretation: suggests a psychodynamic interpretation of pupil's behavior.
11. Behavioral interpretation: suggests interpretation based on principles of learning.
12. Actions taken: asks about steps taken to correct the problem with respect to conferences, other referrals, etc.
13. Summary: summarizes information provided or decisions made for clarification, decision-making, etc.

Strategy Planning

14. Behavioral data: suggests obtaining of more information about the behavioral contingencies, e.g. observing in the class, playground or home, asking teacher observations.
15. Dynamic data : suggests obtaining more information relative to the child's attitude, personality via testing, depth interview etc.
16. Non-specific data: suggests obtaining more information without specific purpose, e.g.," I'll arrange to see the parent about that."

Figure 5 (continued)

17. Behavioral change: suggests specific courses of action in coping with behavioral responses.
18. Dynamic change: suggests changes directed towards self-understanding, improving attitudes, intervening variables.
19. Non-specific change: suggests non-specific changes, e.g.'We'll see what we can do to let him improve,"etc.
20. Modeling: models a response in holding the teacher to an alternative strategy for the child.

Ratios

21. Sum of Rapport over sum of structure.

22. Sum of explanation over sum of structure.

23. Sum of behavioral assessment over sum of assessment.

24. Sum of non-specific assessment over sum of assessment.

25. Sum of dynamic assessment over sum of assessment.

26. Sum of behavioral strategy over sum of strategy.

27. Sum of non-specific strategy over sum of strategy.

28. Sum of dynamic strategy over sum of strategy.

29. Sum of structure responses over sum of total responses.

30. Sum of assessment responses over sum of total responses.

31. Sum of strategy responses over sum of total responses.

32. Sum of behavioral responses over sum of total responses.

33. Sum of non-specific responses over sum of total responses.

34. Sum of dynamic responses over sum of total responses.

were instructed in this procedure by Dr. Goodwin and reached reliability coefficients of .80 or better prior to the beginning of the ratings of the tapes.

In addition to the behavioral criterion discussed here, other traditional type criteria were also used. The following criteria were determined for the institute:

1. Behavioral Criteria relating to psychologist-teacher interview styles and content.
2. Mid-term and Final Evaluations of the Institute by Enrollees.
3. Final Examinations, one written by Drs. Barclay and Catterall and the other written by Drs. Goodwin and Garvey.
4. Post-institute time distribution in terms of ways in which the psychologist spends his time.
5. Post-institute measures of theoretical orientation, school psychological practice, concept check list, etc.

Thus a number of criteria for effective school psychology practice as related to the institute outcomes were determined. These were based on objective behavioral evaluation, subjective enrollee determination, test scores, and paper-pencil theoretical and practical instrumentation reflective of cognitive approach.

Predictors

With the determination of specific criteria for evaluating effective behavior on the part of the participants, it was then possible to treat the entire array of pre-institute measures and factual information as possible predictors. This was in point of fact done and the results will be reported in the chapter dealing with the factor analysis and regression equations obtained between various criteria and predictors.

Treatments: Traditional and Innovative (Micro-Consultation)

Within the research format of the institute the experience itself was constituted the gross independent variable. However, there were a number of other activities which constitute specific treatment procedures. The didactic instruction and the role of consultants obviously constitutes a major treatment condition. The group critiquing experiences are also obvious as a treatment. But the most unique treatment variable is the use of television in the initial and subsequent psychologist-teacher interviews, and the procedure used in this institute for what the writer originally coined the term micro-consultation. This procedure was modeled on the micro-teaching format. This procedure was planned by the staff members of the institute. The specific technical format of the procedure was devised chiefly by Dr. Goodwin and Dr. Garvey. Dr. Goodwin at the AERA symposium (Barclay, Goodwin, Garvey, 1968) described the micro-consultation procedure in the following manner.

"Micro-consultation is the primary method we used to teach practicing school psychologists consultation skills. The technique was modeled after the micro-teaching format developed at Stanford University in 1963 (Bush & Allen, 1964). Micro-consultation and its precursor, micro-teaching, consists of a series of brief face-to-face encounters designed to give the trainee practice in acquiring specific skills in a naturalistic setting. Translating this model to our purposes, micro-consultation became a series of scaled-down teacher-psychologist interviews through which a number of specific consultative skills could be learned by the participants."

"By way of historical background, in 1963 teacher trainees at Stanford University participated in an experimental evaluation of the micro-teaching procedure. Teachers assigned to the group undergoing this process first prepared a brief (5 minute) teaching lesson and presented this lesson to a group of four or five students while being video-taped. At the conclusion of the brief lesson, the pupils were excused and the teacher witnessed a playback of her performance. The specific skills to be trained such as establishing frames of reference, achieving closure, etc., were explained and a video-tape illustration of these behaviors was shown to the trainee. At once, another group of five pupils came in and the teacher taught the same lesson again, only this time trying to improve her use of the criterion skills, etc."

"As might be expected, the trainees exposed to the micro-teaching program demonstrated far greater acquisition of teaching skills than did their counterparts whose instruction was based on traditional practice-teaching procedures."

"The convincing outcomes of the micro-teaching study pointed the way to a new training method which did not depend entirely on student understanding and willingness to try. While important, these latter qualities have not proven sufficient in themselves to produce changes in behavior. A recently completed research study (Goodwin, 1966) found this to be true in training second grade teachers to use operant techniques. The frequent expression of frustration by the teachers in being unable to apply the new techniques consistently gave evidence to the fact that when the outcomes of instruction require the learner's behavior to change, more powerful techniques have to be used."

"Further support for this principle is furnished by Bruner (1964) who has pointed out that learning begins sequentially with an 'enactive' representation of a concept or a 'set of actions appropriate for achieving a certain result.' Without a firm grounding in the 'feel' of how something works, the application of a procedure may be less than complete. As it was our aim in the institute to introduce a method of behavioral analysis which was totally unfamiliar to the enrollees, we took Bruner's observations to heart and planned our training to commence on an enactive level."

"Micro-consultation in its simplest form required our identifying the skills to be learned, presenting trainees with a model performing these skills, and then getting the trainees to practice them until their performance matched that of the models. Could these training techniques, proven useful with teachers, be applied to the training of psychologists? The answer to this question hinged upon the possibility of defining psychological skills behaviorally. More particularly could the array of interview-consultation skills be translated into behavioral units? As must be clear by now, the steps outlined in the behavioral analysis readily met this challenge. Asking the teacher what she regards as the child's main problem and asking her to define that problem behaviorally are already listed as steps in the behavioral analysis and needed only be given a place in the training sequence. In addition to the skills specified in the behavioral analysis, Dr. Garvey and myself identified the key skills associated with consultation generally. These latter techniques relate to such matters as the development and maintenance of rapport, clarification of goals, etc. and were included in the micro-consultation format. After being defined behaviorally, all the consultation skills selected for training were divided into small teaching units. These units became the basis for the micro-consultation training and were presented first in lecture form along with a rationale for their use. After group discussion and watching video-tape illustrations, the enrollees practiced the application of these techniques in a series of brief, ten minute interviews. This is what is meant by micro-consultation. Enrollees were assigned to six-person groups for the micro-consultation interviews themselves. The same procedure was followed regardless of the specific skills being learned. The micro-consultation format was organized as follows."

MICRO-CONSULTATION FORMAT

Approximate time	
10 minutes	1. "After reviewing referral information on the child to be discussed, the enrollee conducts a ten-minute interview in which he attempts to make use of the skill being learned. For example, if assessment skills are being trained, the enrollee attempts to identify the environmental contingencies controlling the pupil's behavior, asks questions about what the child finds rewarding, and how the teacher typically responds to the child's behavior.
15 minutes	2. Along with the five other members of his group, the enrollee watches a video-tape replay of his performance. As soon as each member has completed a rating of the performance against a list of criterion behaviors, an open discussion ensues regarding specific aspects of the interview.
5 minutes	3. Alternative responses to a particular interaction with the teacher are discussed and a model is role-played by a faculty or group member of a pre-made video-tape model of the particular skill is shown.

5 minutes	4. The enrollee completes a shorter five-minute tape, repeating the particular sequence discussed and attempts to improve the skill in question.
10 minutes	5. The second trial is replayed on video-tape and concluding comments are offered by faculty and group members. Because of the intensive nature of the micro-consultation process, the enrollee participates in no more than two one hour-and-a-half sessions per day.
(45 minutes total)	

The effectiveness of the micro-consultation procedure derives from its implementation of several principles associated with learning theory. They might be regarded as follows though not necessarily in order of their importance.

1. Discrimination learning. Both supervisor and trainee observe the particular skill being modeled. The models presented are brief and focused on specific behaviors. This method avoids the pitfalls of a verbal description alone, permitting a clear visual and auditory discrimination of the behavior.
2. Immediate feedback. Trainees get immediate feedback as to whether they have been able to perform the required skills. For example, did the trainee describe the procedure to be used during the interview? Did he assist the teacher to decide on a specific behavior to be used as a starting point for the behavioral analysis? When the trainee's response fails to meet criterion levels, further practice is encouraged.
3. Shaping and reinforcement. Seeing daily evidence of one's own growth in competence provides an important source of reinforcement.

Peer and faculty recognition too may enhance the acquisition of skills and serve to encourage the enrollee at other times when a particularly stubborn response is being learned or overcome.

4. Imitation-modeling. Some comment must be made about physically enacting new skills. Recent research in the training of teachers to use new techniques indicated that reliance on cognitive means of changing behavior is ineffective (Goodwin, 1966). Russo (1965), Bijou (1966), and others have demonstrated the effectiveness of models in producing behavior change. That is, imitating a response may be essential particularly when established patterns of behavior inhibit the learning of new techniques. This was important in the institute program as enrollees had already an average of four years experience in the field and had developed well defined habit patterns in providing service to teachers."

"Field practicum was provided for trainees to apply skills under naturalistic conditions. Arrangements were made with teachers in nearby elementary schools to make referrals of children with learning and/or behavior disorders. The enrollees talked with the teachers about the referral and arranged to observe the pupil in the classroom at a time when he could see the problem behavior in action. The initial interview with the teacher, as well as follow-up interviews were video-taped for further evaluation. Each enrollee had the opportunity to follow a referral from beginning to end using the behavioral techniques described and practiced at the institute."

"Group critiquing of video-tapes permitted an evaluation of individual performance against criterion levels defined by our outlines and video-tape models. The procedure for group critiquing was similar to that used in micro-consultation. Probably of crucial importance to each enrollee was the consideration of how he might have handled an interaction, whether helping a teacher define a target behavior or planning a modification strategy. That is, group critiquing often generated several alterative approaches to the same problem, thus increasing the generalizability of the procedure to different settings and helping each psychologist fit the techniques to his own unique set of skills and personality."

Thus the specific treatments used in this institute were for the most part traditional didactic teaching, use of consultants, group critiquing and seminar activities. Micro-consultation and the other use of television were the unique treatment features.

Follow-Up

During the Spring of 1967 prior to the institute application was made for a small educational research grant to implement the follow-up of the participants and controls. This grant was awarded and the follow-up procedures took place during the fall of 1967 in the months of October, November and December. Dr. Dwight L. Goodwin and the writer traveled throughout the United States collecting additional information on participants and controls. Dr. William P. Garvey and Dr. Calvin D. Catterall followed up the majority of participants and controls residing in California and Arizona. Dr. William P. Garvey conducted the two one-day work shops for active controls who resided in the Bay Area. The staff obtained an audio tape recording of a psychologist-teacher interview in the geographical site of the participant's or control's school. We also talked to many hundreds of teachers, addressed groups of professionals at banquets and receptions, and explained the goals of the institute to many administrators and other psychologists.

Statistical Analysis

The statistical analysis of the data obtained in this research effort has been a monumental task. Dr. Richard Snow of the Stanford Research and Development Center functioned as the chief statistical consultant. A host of other individuals including Mr. Rodger D. Marion at California State College at Hayward, Mr. Robert Proctor, programmer affiliated with the Stanford Research and Development Center, and others helped to expedite the research analysis. Dr. Dwight L. Goodwin, Associate Director of the Institute and the writer completed the major task of analyzing the data outcomes of the institute. Mr. Rodger D. Marion also provided some data analysis in conjunction with the writer at California State College at Hayward. The majority of the data anlysis was completed at the Stanford Computational Center by sub-contract with Dr. Richard Snow.

Suffice it to say here that the general analysis of the data fell into the following categories: 1) descriptive and correlational information regarding applicants and individuals within the specific treatment conditions, 2) analyses of variance and covariance completed on pre-post test and behavioral data, and 3) analyses of covariance completed on pre-post-field data for the various treatment groups. Each of these specific statistical procedures will be detailed in the relevant chapters since a complete and exhaustive description at this point would only serve to confuse the reader.

Questions Pertaining to the Research Effort

There are two major areas in the design of this study which lend themselves to some specific questions regarding outcomes. The first area is a descriptive and correlational one. Essentially here the purpose is to ascertain what are the descriptive characteristics, attitudes, and backgrounds of individuals who applied to a school psychology institute? The second area relates to the experimental phase of the research design. And here, the fundamental purpose is to ascertain what changes, if any, took place in the participants as a consequence of the institute. Allied with this second question is also the problem of ascertaining the holding power of the institute treatment procedure.

A number of specific hypotheses could be formulated at this point regarding research outcomes. However, in consideration for clarity of understanding of the total impact of this institute, the balance of this research report will focus on these items:

1. What are the descriptive characteristics of applicants for and participants in a school psychology institute held at California State College at Hayward during the summer of 1967?
2. What types of relationships are found between variables collected in the pre-institute assessment phase for applicants and participants?
3. What is the relationship between theoretical paper-pencil measures of orientation and function as school psychologists and behavioral ratings obtained from video and audio taping sequences?
4. What differences occurred in both cognitive and behavioral dimensions on specific criteria of evaluation?
5. What was the overall holding power of the institute in terms of functional school psychology practice?

Summary

This chapter has reported the overall design and instrumentation of the research done in conjunction with an NDEA grant for training school psychologists at California State College at Hayward during the summer of 1967, and a small educational research grant obtained by the writer for purposes of research evaluation of this institute. Selection of participants was accomplished from a pool of applicants. This was done on a random stratified basis. The institute was constituted the gross independent variable with dependent variables being identified as responses, both cognitive and behavioral obtained on post-institute evaluation and field evaluations. The instrumentation including predictors and criteria have been detailed. The follow-up procedures took place during November and December, 1967 and included personal visits to each of the participants and 12 of the controls. Statistical analysis consisted of a variety of techniques.

CHAPTER IV

DESCRIPTIVE,CORRELATIONAL,AND FACTOR-ANALYTIC RELATIONSHIPS FOR APPLICANTS AND ENROLLEES

The purpose of this chapter is to describe the characteristics of the applicants, enrollees and controls on a number of pre-institute, institute, and post-institute variables. To this end, the descriptive and correlational data will be analyzed in order. Only summary tables of data will be included in order to focus more readily on the most significant findings of this study. Detailed tables relating to descriptive characteristics and correlational matrices will be relegated to the appendix. (see Appendix 2)

The analysis of these data falls logically into the following categories: 1) demographic and descriptive characteristics, 2) correlational relationships, and 3) factor-analytic studies of applicants and enrollees. Within the chapter, the predominant emphasis will be placed on the enrollees, though tables will include the characteristics of the applicants and controls as well. Male-female differences will not be discussed at great length nor will differences between enrollees and applicants as such be the focus of much discussion. The reasons for this are substantiated chiefly on the fact that the rnollees were randomly drawn from the total applicant pool, and secondly, the fact that Marion (1968) in a study of pre-institute variables did not find many significant differences either between applicants or enrollees or male and female groupings.

Part I. Descriptive Characteristics

One of the first questions of this study relates to the characteristics of the school psychologists who applied to this institute. Admittedly, this particular sample of school psychologists was one who had heard of an institute and applied for it. Nonetheless, in view of the nature of the sampling procedures used in selecting the enrollees for the institute, i. e. randomization from a pool of qualified and eligible individuals on a geographic basis, it is believed that the analysis of the data obtained in this study may aid to understand the characteristics of school psychologists on a nation-wide basis. Despite the limitations of the sample itself, the writer knows of no other comparable information which describes in such depth the characteristics of a group of school psychologists drawn from a national sample.

The data to be discussed in this section relate to responses obtained on two instruments included in the original packet of materials sent to all applicants for the institute. These are presented under figures 1 and 2. The first of these instruments was entitled the School Psychology Job Analysis Inventory which was constructed by the writer and others in order to survey the service characteristics of the applicants. It was believed that information relating to the size of community served, number of courses taken, credentials held, etc., might be related to ultimate approximation of criterion performance on one or more of the multiple criteria identified as terminal goals of this institute. Further, it was also believed that some of these factors might be related to the theoretical orientation which the applicants preferred. The second instrument was titled: Theoretical Orientation Questionnaire and was constructed on the basis of a rationale described by the writer (J. R. Barclay: Counseling and Philosophy: A Theoretical Investigation, 1968, Houghton-Mifflin, Boston). This latter questionnaire requested that each of the applicants identify his theoretical preferences on a wheel schema. These theoretical preferences were related specifically to differential philosophical attitudes of stances towards reality and existence. Though 12 theorists are mentioned, the 12 categories readily fit into three major orientations which were:

Figure 1

N. D. E. A. INSTITUTE

CALIFORNIA STATE COLLEGE AT HAYWARD

SCHOOL PSYCHOLOGY JOB ANALYSIS INVENTORY.

EXPLANATION: The following questionnaire supplements the regular U. S. Government forms by providing information relating to the eligibility requirements of this particular institute. Please check the appropriate categories.

NAME____________________ DATE____________ 20. AGE______

22. School Address ____________________

23. Number of years experience as
(1) school psychologist ______
(2) school psychometrist ______
(3) elementary counselor ______
(4) teacher, elementary ______
teacher, secondary ______
(5) special education ______
(6) secondary counselor ______
(7) administrator ______
(8) other (specify) ____________

24. Title of Position ____________________
(1) Full-time__ (2) Part-time___ (1/2 or less)

25. If part-time check the appropriate category for describing the balance of your time

(1) Student ____
(2) teaching____
(3) research____
(4) private practice____
(5) clinical affiliation ____
(6) other (specify) ____________ ____

26. Check the level or levels serviced by you:

(1) kindergarten ______
(2) elementary ______
(3) junior high ______
(4) senior high ______
(5) special ed. ______
(6) other (specify) ____________ ____

27. Check the following personnel serving in your school system. (Do not include yourself)

(1) counselors and guidance workers____
(2) psychiatrists ____
(3) clinical psychologists ____
(4) remedial reading specialists ____
(5) school doctors ____
(6) school nurses ____
(7) school psychologists ____
(8) school psychometrists____
(9) school social workers____
(10) speech correctionists____
(11) hearing therapists ____
(12) other (specify) ____________ ____

28. Check the community population:

(1) under 5000 ______
(2) 5000 - 10,000 ______
(3) 10000 - 25,000 ______
(4) 25,000 - 50,000 ______
(5) 50,000 - 100,000 ______
(6) Over 100,000 ______

29. List years of clinical experience (other than in school setting)

(1) child guidance clinics ____
(2) hospital ____
(3) private practice ______
(4) other (specify) ____________ ______

30. Have you had an Internship placement? (1) yes ________ (2) no_____

31. If yes, check appropriate categories.

(1) 2-3 mos.______ (2) 3-6 mos. _____ (3) 6-9 mos._____ (4) 9-12 mos._____

32. Does your state provide a teaching credential or certificate for school psychology or psychometry? (1) yes __________ (2) no _______

33. Check the credentials you hold:

(1) elementary teaching______
(2) secondary teaching_______
(3) school psychometry_______
(4) school psychology____
(5) school social work___
(6) school counseling____
(7) special ed._____
(8) administration _______
(9) other(specify) ______________

34. Does your state provide licensure or certification for psychological practice?
(1) yes _________ (2) no ______

35. Are you certificated or licensed as a psychologist in your state?
(1) yes _________ (2) no _______

36. Check the following professional organizations which you hold membership in.
(1) American Psychological Association_
(2) Division 16 A.P.A. _____
(3) A State Psychological Association__
(4) A State School Psychology Assn.____
(5) American Personnel & Guid.Assn.____
(6) A State Personnel & Guid.Assn.______
(7) A teacher organization _____
(8) American Educational Research Assn._
(9) A State Educational Research Assn.__
(10) Other (specify) ______________ ____

37. What was your undergraduate major?______________________________

38. What was your overall undergraduate grade-point average? (Compute A = 4, B = 3, C = 2, D = 1)____________

41. How many graduate courses have you taken in preparation for your school psychology work?______________

43. What was your overall graduate grade-point average (Compute A = 4, B = 3, C = 2, D = 1)

46. Check the following courses which you have had in your preparation for school psychology.

(1) General Psychology _____
(2) Experimental Psych._____
(3) Child Psychology _____
(4) Learning or Adv.Ed. Psychology _____
(5) Physiological _____
(6) Motivation _____
(7) Personality _____
(8) Abnormal _____
(9) Social _____

47.
(10) Educational Found._____
(11) Methods & Curricu. _____
(12) Administration _____
(13) Philoso. & Hist.Ed.____
(14) Tests & Measure. _____
(15) Individual Test._______
(16) Projective Test._______
(17) Counseling Theory_____
(18) Statistics elemen.____

48.
(19) Adv. Statis.____
(20) Clini.Psych.____
(21) Excep.Child_____
(22) Learning Dif.___
(23) Remedial Ed.____
(24) Practicum in Counseling_____
(25) Practicum in Testing _____
(26) Internship_____

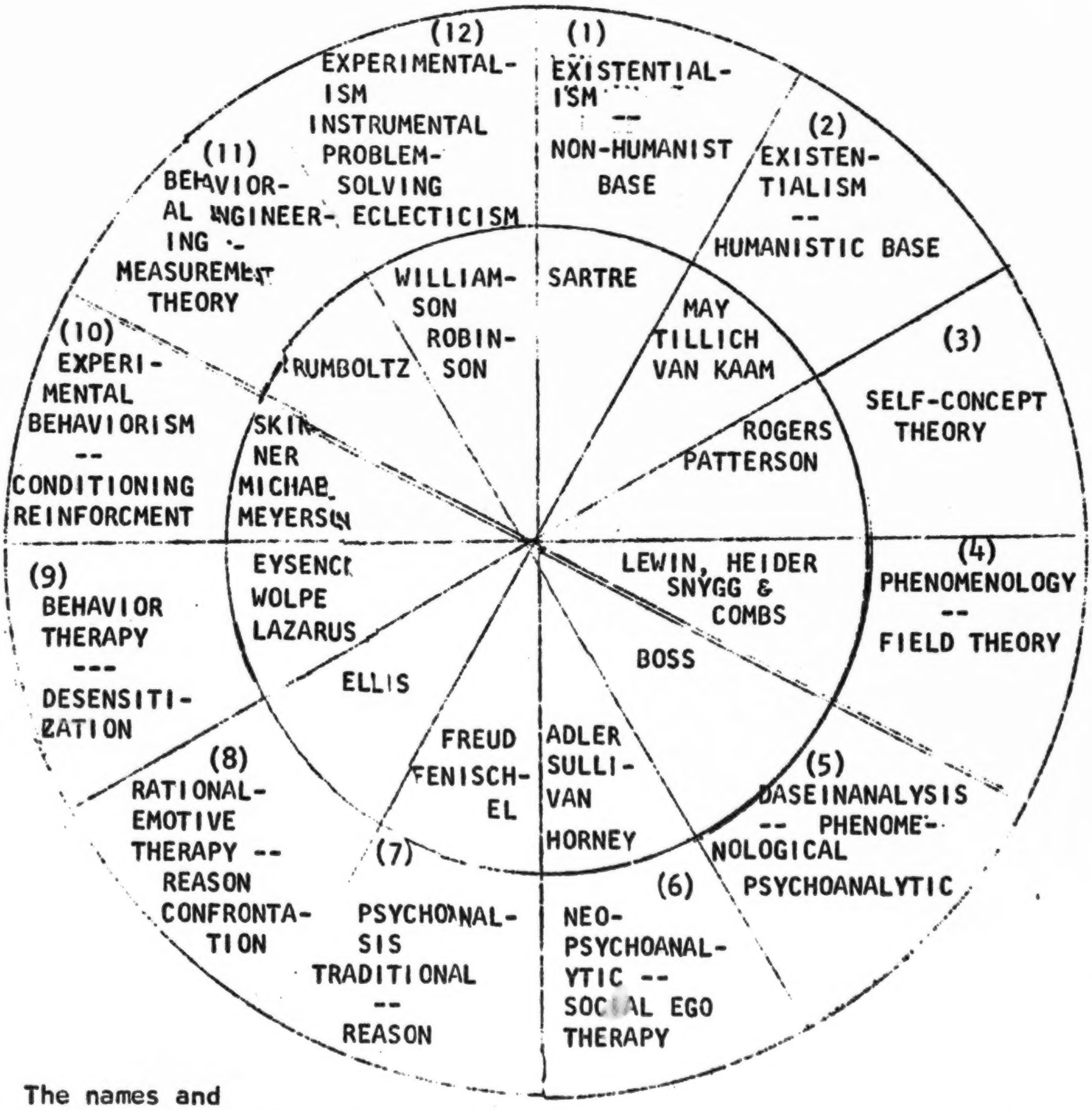
49. List any publications, papers read and the title of your thesis if you have a Master's degree. Append extra page if necessary.

Thesis ____

Figure 2

THEORETICAL ORIENTATION

EXPLANATION: Psychological theory as applied to school psychology tends to have a basis in one or more differential approaches. Below is an arrangement of current psychological frames of reference which have influenced the thinking of many school psychologists. Insofar as you are able to determine your own position would you fill out the accompanying questionnaire specifying your preferences for these frameworks.


(1)
EXISTENTIALISM -- NON-HUMANIST BASE
SARTRE
(2)
EXISTENTIALISM -- HUMANISTIC BASE
MAY
TILLICH
VAN KAAM
(3)
SELF-CONCEPT THEORY
ROGERS
PATTERSON
(4)
PHENOMENOLOGY -- FIELD THEORY
LEWIN, HEIDER
SNYGG & COMBS
(5)
DASEINANALYSIS -- PHENOMENOLOGICAL PSYCHOANALYTIC
BOSS
(6)
NEO-PSYCHOANALYTIC -- SOCIAL EGO THERAPY
ADLER
SULLIVAN
HORNEY
(7)
PSYCHOANALYSIS TRADITIONAL -- REASON
FREUD
FENISCHEL
(8)
RATIONAL-EMOTIVE THERAPY -- REASON CONFRONTATION
ELLIS
(9)
BEHAVIOR THERAPY --- DESENSITIZATION
EYSENCK
WOLPE
LAZARUS
(10)
EXPERIMENTAL BEHAVIORISM -- CONDITIONING REINFORCMENT
SKINNER
MICHAEL
MEYERSON
(11)
BEHAVIORAL ENGINEERING -- MEASUREMENT THEORY
KRUMBOLTZ
(12)
EXPERIMENTALISM INSTRUMENTAL PROBLEM-SOLVING ECLECTICISM
WILLIAMSON
ROBINSON

NOTE: The names and authorities mentioned are simply representative of these points of view. There are many others who have not been included.

THEORETICAL ORIENTATION QUESTIONNAIRE

Please examine the dimensions on the previous page and indicate your preferences by placing the code numbers of the positions you feel most closely aligned to in the boxes on the right.

EXAMPLE:

If your orientation were Neo-psychoanalytic, Rational Emotive, Behavioral Engineering you would fill in the following code.

6	8	11

Now, please examine the figures and indicate your preferences.

1. Please refer to the figure and characterize your present theoretical orientation in relationship to the dimensions presented. In the corner of each position is a number. Place the number (s) of the positions you feel most closely aligned to in the boxes to the right.

1st	2nd	3rd

2. How would you characterize your theoretical position (s) at the completion of your graduate training?

1st	2nd	3rd

3. Have you changed your orientation?

YES	NO

4. If so how have you changed?

		FROM	
	1st	2nd	3rd
		TO	

5. Please think of three professors who influenced you in your preparation for school psychology. Identify their department, subject and characterize their orientation insofar as you can remember.

			ORIENTATION CODE NO.
A.	Department	Subject	
B.	Department	Subject	
C.	Department	Subject	

6. Of your colleagues in school psychology, either in the same district or surrounding districts, characterize their predominant orientation. Use one, two, or three codes.

1st	2nd	3rd

(T.O.Q.)

1) self-concept or phenomenological orientation, 2) clinical orientation, and 3) behavioral orientation. Referring to the wheel figure itself (see figure 2) categories 1-4 were considered broadly phenomenological, categories 5-8 were considered clinical, and categories 9-12 behavioral. All applicants were classified as to theoretical orientation by the major triad in which their first code number and preference was listed. Hereafter discussion of enrollees will include analysis of data by preferred orientation.

1. Demographic Information

Tables 1 and 2 summarize the level serviced in the schools and the geographic distribution of applicants by theoretical orientation. As is evident from an inspection of table 1 the majority of the applicants served the school broadly as district consultants with an emphasis on special education and elementary areas. Table 2 indicates the number of applicants from various sections of the nation and their theoretical orientation. Table 3 summarizes the number and kinds of credentials which applicants held. In general, the applicants held a mean of 4.21 credentials, with self-concept applicants holding slightly more credentials per person than behavioral applicants (4.44 vs. 3.60). Individuals with a self-concept orientation tend to hold more elementary and counseling credentials than do others with the difference being particularly noticed between the self-concept and behavioral groups. Strangely enough, those applicants choosing a clinical orientation held more administrative credentials and special education credentials. Not unexpected was the heavier licensure and psychological certification held by the clinical group.

TABLE 1

APPLICANT SUMMARY LEVEL SERVICED

	Total N	Per Cent of Total	Total Self-Concept	Per Cent of Self-Concept	Total Clinical	Per Cent of Clinical	Total Behavioral	Per Cent of Behavioral
Full Time	92	94.8	48	98.0	25	86.2	19	100
Part Time	5	5.2	1	2.0	4	13.8		
Kindergarten								
Elementary	40	40.4	21	41.2	9	31.0	10	52.6
Junior High	5	5.1	1	2.0	1	3.4	3	15.8
Senior High	9	9.1	7	13.7	2	6.8		
Special Ed. District	45	45.4	22	43.1	17	58.6	6	31.6
	99		51		29		19	

TABLE 2

APPLICANT SUMMARY GEOGRAPHIC DISTRIBUTION

	Total N	Per Cent by Region	Total N Self-Concept	Per Cent Self-Concept	Total N Clinical	Per Cent Clinical	Total N Behavioral	Per Cent Be-havioral
Southern California	23	23.5	13	27.0	7	24.1	3	15.0
Northern California	30	31.0	18	37.0	7	24.1	5	25.0
Northwest	11	11.2	4	8.2	5	17.2	2	10.0
Rocky Mountain	8	8.2	5	10.2	2	6.9	1	5.0
Midwest	16	16.3	6	12.2	4	13.8	6	30.0
South	2	2.1	1	2.0			1	5.0
East	8	8.2	2	4.0	4	13.8	2	10.0
	98		49		29		20	

TABLE 3

APPLICANT SUMMARY CREDENTIALS HELD

	Total N Holding Credential	Per Cent of Total Applicants	Total N Self-Concept	Per Cent Self-Concept	Total N Clinical	Per Cent Clinical	Total N Behavioral	Per Cent Be-havioral
1. Elementary	56	56.5	31	61.0	15	52.0	10	52.6
2. Secondary	48	48.4	25	49.0	15	52.0	8	42.1
3. Psychometry	43	44.0	28	55.0	10	34.5	5	26.3
4. School Psychology	67	68.3	34	67.0	20	69.0	13	68.4
5. Social Work	7	7.1	4	7.8	2	6.9	1	5.2
6. Counseling	55	56.1	32	62.7	15	52.0	8	42.1
7. Special Ed.	10	10.2	5	9.8	4	13.8	1	5.2
8. Administrative	17	17.3	6	11.8	8	27.6	3	15.6
9. Licensed	79	80.6	39	76.4	26	89.6	14	73.7
10. Certified	31	31.6	14	27.5	8	27.6	9	47.3

Total N of Applicants	98
Total N Self-Concept Orientation	49
Total N Clinical Orientation	29
Total N Behavioral Orientation	20

Mean No. of Total Credentials Held $\frac{413}{98} = 4.21$

Mean No. of Total Credentials Held Self-Concept $\frac{218}{49} = 4.44$

Mean No. of Total Credentials Held Clinical $\frac{123}{29} = 4.24$

Mean No. of Total Credentials Held Behavioral $\frac{72}{20} = 3.60$

Table 4 surveys the size of the community in which the applicant was located. Some 46 per cent of the total applicants were working in school communities of 50,000 or over. Individuals with a self-concept orientation tend to work in communities that are smaller as may be seen from the fact that 31 per cent of the self-concept orientation group were found in communities from 10 to 25,000 in size. Of equal interest is the fact that few individuals with a behavioral orientation could be found in the smaller communities.

Table 5 surveys the internship placements and length of internships reported by the applicants. Approximately one-third of the applicants reported that they had had an internship of some kind. The other two-thirds indicated that they had not. Surprisingly enough individuals with a clinical orientation had fewer internships than those preferring another orientation. Of those who indicated that they had had an internship, by far the majority said they had had a year-long experience.

Table 6 reports the results of memberships in professional organizations. The mean number of memberships held by an applicant was 2.53. Approximately one-fifth of the enrollees and applicants indicated that they belonged to the American Psychological Association. This contrasts with the 57 per cent who said they belonged to a state school psychological association, and the 48 per cent who belonged to the American Personnel and Guidance Association. Of greatest interest is the fact that 81 per cent of the applicants indicated that they belonged to a state guidance association. These findings emphasize the fact that school psychologists are not considering the American Psychological Association

TABLE 4

APPLICANT SUMMARY BY COMMUNITY SIZE SERVICED

	Total N	Per Cent of Total	Total Self-Concept	Per Cent of Self-Concept	Total Clinical	Per Cent of Clinical	Total Be-havioral	Per Cent of Behavioral
Community Size								
Under 5,000	5	5.0	3	5.8	2	6.9		
5 - 10,000	11	11.1	5	9.8	4	13.8	2	10.5
10 - 25,000	24	24.2	16	31.4	5	17.2	3	15.8
25 - 50,000	13	13.1	5	9.8	4	13.8	4	21.1
50 -100,000	22	22.2	10	19.6	6	20.7	6	31.6
Over 100,000	24	24.2	12	23.5	8	27.6	4	21.1
	99		51		29		19	

APPLICANT SUMMARY BY INTERSHIP PLACEMENT AND LENGTH OF INTERNSHIP

	Total N	Per Cent of Total	Total Self Concept	Per Cent of Self-Concept	Total Clinical	Per Cent of Clinical	Total Behavioral	Per Cent of Behavioral
Internship "Yes"	37	36.6	21	38.9	9	31.0	7	36.8
Internship "No"	64	63.4	32	59.2	20	69.0	12	63.2
Length of Internship								
2-3 months	7	19.4	4	20.0	1	11.1	2	28.6
3-6 months	10	27.8	4	20.0	3	33.3	3	42.8
6-9 months	2	5.6	1	5.0	1	11.1		
9-12 months	17	47.2	11	55.0	4	44.4	2	28.6
	36		20		9		7	

TABLE 6

APPLICANT SUMMARY BY MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

	Total N	Per Cent of Total	Total Self Concept	Per Cent of Self-Concept	Total Clinical	Per Cent of Clinical	Total Behavioral	Per Cent of Behavioral
A. P. A.	20	20.4	7	13.7	7	24.1	6	21.0
Division 16 APA	4	4.0	1	2.0	2	7.0	1	5.3
State Psychological Association	33	33.0	18	35.3	9	31.0	6	21.0
State School Psychology Assn.	57	57.0	31	60.7	17	59.0	9	47.4
A. P. G. A.	48	48.2	32	63.0	10	34.4	6	21.0
State Guidance Association	80	81.0	45	88.2	19	66.0	16	55.2
Teachers Association	2	2.0	2	4.0				
A. E. R. A.	4	4.0	4	8.0				
State Educational Research Assn.								
	248		130		64		44	

Mean Membership Total $\frac{248}{98}$ = 2.53

Mean Membership Self-Concept $\frac{130}{51}$ = 2.54

Mean Membership Clinical $\frac{64}{29}$ = 2.20

Mean Membership Behavioral $\frac{44}{20}$ = 2.20

as their primary professional identification. The clinical group tend to have a closer identification with the A. P. A. and a considerably lesser involvement with either state guidance associations or A. P. G. A.

Table 7 reports the number of graduate courses taken by applicants in various fields. A number of specific items could be singled out for more detailed analysis, but it is interesting to note generally that the applicants had a mean of 17.19 courses which they had taken broadly related to the school psychology field. Those applicants with a clinical orientation appear to have taken fewer courses in learning, statistics and counseling theory than either self-concept or behavioral applicants. Conversely, applicants with a behavioral orientation appear to have taken more courses in learning, counseling theory, statistics, etc. All of the behavioral orientation group had taken both individual tests and projective techniques.

From a composite point of view one might say that the typical applicant for this institute tended to work in a school community of 50,000 or over, held an average of four credentials usually including an elementary or secondary teaching credential plus a counseling and school psychology or psychometry credential, usually did not have a formal internship experience, was chiefly affiliated with state guidance or school psychology associations, and had taken about 17 professional courses for the work he was doing. The self-concept group tended to be more teacher-counselor oriented in their coursework and professional orientation, whereas the clinical group showed some marked contradictions in terms of fewer internships, fewer courses taken, and a lesser identification with counseling interests. The behaviorists appear to be

TABLE 7

APPLICANT SUMMARY BY COURSEWORK

	Total N	Per Cent of Total	Total Self-Concept	Per Cent of Self-Concept	Total Clinical	Per Cent of Clinical	Total Behavioral	Per Cent of Behavioral
1. General Psych.	96	96	50	98	28	97	18	95
2. Experimental Psych.	44	44	22	43	15	52	7	37
3. Child Psych.	85	85	46	90	24	83	15	79
4. Learning	81	81	42	82	22	76	17	89
5. Physiological	23	23	12	24	9	31	2	11
6. Motivation	19	19	9	18	7	24	3	16
7. Personality	68	68	38	75	15	52	15	79
8. Abnormal	63	63	32	63	19	66	12	63
9. Social	75	75	34	67	29	100	12	63
10. Ed. Foundations	69	69	37	73	21	72	11	58
11. Methods & Curriculum	75	75	40	78	20	69	15	79
12. Administration	42	42	23	45	13	45	6	32
13. Philosophy & History Ed.	66	66	32	63	21	73	13	68
14. Tests & Measurements	98	98	51	100	28	97	19	100
15. Individual Tests	95	95	49	96	27	93	19	100
16. Projective Techniques	64	64	35	69	19	66	10	53
17. Counseling Theory	87	87	47	92	23	79	17	89
18. Element. Statistics	91	91	49	96	28	97	14	74
19. AdvancedStatistics	45	45	26	51	9	31	10	55
20. Clinical Psych.	46	46	24	47	12	41	10	53
21. Except. Child	80	80	42	82	25	86	13	68
22. Learning Difficulties	39	39	20	39	11	38	8	42
23. Remedial Ed.	56	56	29	57	15	52	12	63
24. Practicum Counseling	62	62	32	63	20	69	10	53
25. Practicum Testing	79	79	44	86	21	72	14	74
26. Internship	37	37	22	43	8	28	7	37

Mean No. of Courses (Total) $\frac{1685}{98}$ = 17.19

Mean No. of Courses Self-Concept $\frac{887}{51}$ = 17.39

Mean No. of Courses Clinical $\frac{489}{29}$ = 16.86

Mean No. of Courses Behavioral $\frac{309}{19}$ = 16.26

concentrated chiefly in larger communities, and appear to hold fewer credentials per applicant.

2. Other Descriptive Information

Other information which was obtained from the School Psychology Job Analysis Inventory is presented in tables 8 and 9. These are summary tables which were compiled directly from the computer print-out. Original tables relating to each of these groups are found in Appendix . Figure 3 lists the explanation of the variables.

The items on these tables will be discussed in summary fashion. Statistical analyses such as T tests of significance of difference were not completed on the differences between means, thus interpretations are based only on the visual inspection of the data. For variable 1 (years of experience as a school psychologist) it is apparent that the female applicants have generally more experience as school psychologists than do the male applicants. The applicants in general had three to four years of experience as a school psychologist. Among the enrollees, individuals with a self-concept orientation tended to have served as school psychologists longer than either those with a clinical or behavioral orientation.

In terms of other school experience, few had had much experience as an elementary counselor, but individuals with a self-concept orientation tended to have about one and one-half years of experience as a secondary counselor. For all applicants the female ones tended to have three to four years of elementary teaching experience whereas the male applicants tended to have two to three years of secondary teaching experience. Male enrollees also tended to have three to four years of

Figure 3

MEANS, STANDARD DEVIATIONS ON EXPERIENTIAL AND GRADE POINT VARIABLES

Variable No.	Explanation
1	Number years experience as school psychologist
2	Number years experience as school psychometrist
3	Number years experience as elementary counselor
4	Number years experience as elementary teacher
5	Number years experience as secondary teacher
6	Number years experience in special education
7	Number years experience as secondary counselor
8	Number years experience as administrator
9	Number of other counselors and guidance workers in district
10	Number of psychiatrists available to district
11	Number of clinical psychologists in district
12	Number of remedial reading specialists in district
13	Number of school physicians in district
14	Number of school nurses in district
15	Number of other school psychologists in district
16	Number of other school psychometrists in district
17	Number of school social workers in district
18	Number of speech correctionists in district
19	Number of hearing therapists in district
20	Number of years experience in child guidance clinics
21	Number of years experience in hospital settings
22	Number of years experience in private practice
23	Grade-point average undergraduate
24	Number of graduate courses taken in preparation for school psychology
25	Grade-point average graduate
26	Number of total graduate and undergraduate courses taken
27	Age

SUMMARY OF MEANS FOR ENROLLEES AND CONTROLS BY SEX ON EXPERIENTIAL AND GRADE POINT VARIABLES

VAR NO	Enrollees		Control A		Control B	
	Male	Female	Male	Female	Male	Female
1	3.9000	4.8000	1.4000	1.8000	1.0000	4.8000
2	0.7000	1.8000	0.2000	0.8000	2.6667	1.0000
3	0.2500	0.7000	0.2000	0.6000	0.0	0.0
4	1.9500	4.9000	3.2000	4.0000	0.3333	3.4000
5	3.4500	2.5000	4.4000	2.4000	0.3333	2.4000
6	0.0500	0.5000	0.0	0.0	0.0	0.4000
7	0.9500	0.7000	1.2000	2.0000	0.3333	2.6000
8	3.6000	0.0	0.0	0.0	0.0	0.2000
9	3.9100	1.0000	1.0000	1.0000	0.3333	1.0000
10	0.7000	0.6000	0.0	0.0	0.3333	0.0
11	0.0500	0.1000	0.2000	0.0	0.6667	0.2000
12	0.8500	0.9000	1.0000	0.6000	0.6667	0.6000
13	0.2500	0.6000	0.0	0.2000	0.0	0.0
14	1.0000	0.8000	1.0000	1.0000	1.0000	1.0000
15	0.6500	0.4000	0.4000	0.4000	1.0000	0.6000
16	0.2500	0.3000	0.6000	0.2000	0.3333	0.2000
17	0.4000	0.5000	0.0	0.2000	0.0	0.2000
19	0.9500	0.7000	1.0000	0.6000	1.0000	1.0000
19	0.3000	0.5000	0.2000	0.2000	0.0	0.2000
20	0.1000	1.5000	0.0	0.2000	0.0	0.0
21	0.2000	0.0	0.0	0.0	0.6667	1.0000
22	0.2500	0.0	0.0	0.8000	0.0	0.2000
23	276.7998	282.3999	290.3999	335.5999	283.3333	279.5999
24	16.3000	17.6000	20.8000	23.0000	18.6667	17.4000
25	318.2998	320.0999	325.2000	350.0000	377.3333	309.0000
26	17.4000	18.7000	17.4000	15.0000	19.0000	19.4000
27	37.6000	44.9000	36.3333	51.0000	41.0000	42.8000
	N 20	N 10	N 5	N 5	N 3	N 5

3

TABLE 9

SUMMARY OF MEANS FOR ENROLLEES AND OTHER APPLICANTS BY THEORETICAL ORIENTATIONS ON EXPERIENTIAL AND GRADE VARIABLES

	Enrollees			Other Applicants			
VAR NO	SelfeConcept Orientation	Clinical	Behavioral	Self-Concept	Clinical	Behavioral	Total All
1	4.5000	4.3333	3.4286	2.4783	1.3889	3.1000	3.2793
2	1.3571	0.8889	0.7143	0.8261	1.2222	0.8000	0.9459
3	0.2857	0.3333	0.7143	1.2609	0.3333	0.3000	0.5135
4	2.4286	4.1111	2.4286	2.7826	2.2222	2.4000	2.7928
5	2.7143	5.1111	1.4286	2.1304	1.4444	0.2000	2.0270
6	0.0	0.1111	0.7143	0.7391	0.6111	0.5000	0.3694
7	1.4286	0.6667	0.0	1.3043	1.1667	2.4000	1.2072
8	4.2857	1.2222	0.1429	0.2174	0.6667	0.1000	0.8378
9	5.2143	1.0000	0.8571	0.8696	0.8333	1.0000	1.4414
10	1.1429	0.2222	0.2857	0.1304	0.4444	0.0	0.3243
11	0.1429	0.0	0.0	0.2609	0.1667	0.1000	0.1712
12	0.9286	1.0000	0.5714	0.7826	0.8889	0.9000	0.8378
13	0.3571	0.2222	0.5714	0.2174	0.3889	0.3000	0.2883
14	1.0000	0.7778	1.0000	0.9565	1.0000	1.0000	0.9730
15	0.5714	0.5556	0.5714	0.6957	0.4444	0.9000	0.6306
16	0.2857	0.0	0.5714	0.4783	0.3333	0.4000	0.3604
17	0.4286	0.3333	0.5714	0.3478	0.6111	0.2000	0.3874
18	0.7857	0.8889	1.0000	1.0000	0.8333	1.0000	0.9189
19	0.2143	0.4444	0.5714	0.3913	0.1667	0.3000	0.3423
20	0.0	1.6667	0.2857	0.0435	0.2222	0.0	0.2342
21	0.0714	0.0	0.4286	0.0435	0.6111	0.0	0.2342
22	0.0	0.0	0.7143	0.4348	1.2222	0.1000	0.3874
23	296.5000	244.6667	286.7141	268.8093	254.0588	274.5000	278.8887
24	18.2143	16.3333	14.2857	17.1000	19.3333	17.0000	18.4412
25	322.0713	320.2222	310.8569	323.0000	324.6665	316.2998	324.6880
26	18.1429	17.4444	17.7143	16.2174	16.4444	15.9000	17.1441
27	40.5000	42.5555	35.8571	38.8261	41.8889	36.7000	40.2321
	N 14	N 9	N 7	N 23	N 18	N 10	N 111

administrative experience. An interesting fact appears in comparing the years of administrative experience by theoretical orientation, (table 9). For some reason enrollees with a self-concept preference had had 4.28 years of administrative experience as against negligible amounts for those with clinical and behavioral orientations.

In regard to other school personnel present in the districts served by the applicants, most of the applicants worked in districts where there appeared to be one or two counselors and in some instances one other school psychologist. Since the mean for other school psychologists is below 1.00 it must be presumed that a number of the applicant school psychologists worked in districts where they were the only school psychologist.

The mean grade-point average for undergraduate work for all applicants was 2.78. For the enrollees the self-concept group had a mean of 2.96, the behavioral group a mean of 2.86 and the clinical group a mean of 2.44. For other applicants, the behavioral group had a mean of 2.74, the self-concept group a mean of 2.68 and the clinical group a mean of 2.54. For this sample, at least, it would appear that individuals with a clinical orientation had the lower grade-point average for undergraduate work. No real differences appeared between male and female applicants on the undergraduate grade-point average. The graduate grade-point average was higher for all groups than the undergraduate averages. The overall graduate grade-point average was 3.24 with only slight variations noted between orientations or sex groupings.

One other factor which should be noted relates to the age of the applicants. The mean age for all 111 applicants whose data were analyzed was 40.23 years. For the enrollees as well as the control groups, female applicants tended to be slightly older. The average age of the male enrollee was 37.60 whereas the average age of the female enrollee was 44.90. In relationship to theoretical orientation, the clinical group, both enrollees and other applicants tended to be the oldest, and the behaviorists tended to be the youngest.

In summary, it would appear that male enrollees and applicants had had more secondary and administrative experience and female enrollees and applicants more elementary experience. Most of the applicants worked in districts where they had help from counseling personnel, but in some instances they were the only school psychologist. By theoretical orientation, it appears that clinically-oriented school psychologists are older than both self-concept oriented or behaviorally oriented psychologists. This is explained in part by the fact that the clinical approach was one of the original approaches in school psychology with self-concept emphases springing from more recent counseling influences and the behavioral approach being a relatively new one.

3. Evaluation and Questionnaire Variables

Figure 4 explains the variables which relate to pre-institute evaluation and questionnaire items. These items include some scores on evaluation instruments filled out by supervisors and colleagues on the applicants in accordance with the U. S. Office policy, some summary variables relating to years of experience, and the institute questionnaires relating to Time Analysis, Psychological Practices, Concept Check List, and Psychological Services Questionnaire. Since these

Figure 4

MEANS, STANDARD DEVIATIONS OF PRE-INSTITUTE EVALUATION AND QUESTIONNAIRE VARIABLES

Variable No.	Explanation
28	Sum factors of confidential evaluation form
29	Total number years as experience as psychologist or psychometrist
30	Total number years experience as teacher or counselor
31	Total number years of all school experience
32	Total number of courses taken for graduate program
33	TIME ANALYSIS: Number of referrals received 1967 year to date (February 1967)
34	TIME ANALYSIS: Number of cases tested February 1967
35	TIME ANALYSIS: Number of reports written February 1967
36	TIME ANALYSIS: Number of individual and group counseling sessions February 1967
37	TIME ANALYSIS: Number of conferences held February 1967
38	TIME ANALYSIS: Number of research activities February 1967
39	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Diagnosis Clinical Scale
40	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Diagnosis Self- Concept Scale
41	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Diagnosis Behavioral Scale
42	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Treatment Clinical Scale
43	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Treatment Self-Concept Scale
44	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Treatment Behavioral Scale
45	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Clinical Scale
46	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Self-Concept Scale
47	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Behavioral Scale
48	PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Eclectic Scale
49	CONCEPT CHECK LIST: Total Clinical Concepts Scale
50	CONCEPT CHECK LIST: Total Self-Concepts Scale
51	CONCEPT CHECK LIST: Total Behavioral Concepts Scale
52	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Individual real
53	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Individual ideal
54	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to School as a Whole real
55	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to School as a whole ideal
56	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services in Research real
57	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services in Research ideal
58	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Community real
59	PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Community ideal

latter instruments have been explained elsewhere, the commentary provided at this point will not include an explanation of the rationale of these several instruments.

Tables 10 and 11 provide the data relating to the variables identified in figure 4. Variable 30 reports the total number of years of experience as a teacher or counselor. The mean for all applicants was 6.76 years of experience. Women applicants tended to have more years of experience than male applicants. The total number of years of experience for all applicants reported on variable 31 results in a mean of 11.09. Though some striking differences occurred in the years of experience both as a teacher and in total for the enrollee groups, this does not appear as relevant in the other applicant categories. In the former, the clinical group had a mean total of 16.55 years of experience as compared with 11.85 and 10.42 respectively for the self-concept and behavioral groups.

Variables 32-38 report differences obtained on the Time Analysis form. This form requested a simple tally of 1) referrals received during February,1967 (variable 33), 2) number of cases tested during February,1967 (variable 34), 3) number of reports written during February, 1967, (variable 35), 4) number of individual and group counseling sessions during February,1967 (variable 36), 5) number of conferences held in February 1967 (variable 37), and 6) number of research activities engaged in during that month (variable 38).

The average number of referrals received by all applicants during that month was 21.85. In the enrollee group females received more referrals than males (26.30 versus 17.40). There was also a tendency noted

SUMMARY OF MEANS OF PRE-INSTITUTE EVALUATION AND QUESTIONNAIRE VARIABLES FOR ENROLLEES AND CONTROLS

VAR NO.	Enrollees		Control A		Control B	
	Male	Female	Male	Female	Male	Female
28	26.7500	26.6000	26.6667	27.0000	24.8000	28.3333
29	4.8000	6.5000	1.6000	2.6000	5.8000	3.6667
30	6.9500	8.8000	8.2000	9.0000	8.4000	3.3333
31	12.4000	14.0000	9.8000	14.2000	14.2000	4.6667
32	17.4000	18.7000	17.4000	15.0000	19.4000	19.0000
33	18.5500	26.3000	17.6667	17.6000	21.0000	19.3333
34	33.1000	30.5000	17.0000	26.0000	18.6000	38.3333
35	26.5000	25.9000	15.1667	17.6000	17.4000	13.0000
36	21.3000	12.3000	11.1667	48.6000	9.6000	21.3333
37	71.9500	75.6000	62.3333	59.0000	70.0000	40.3333
38	1.1500	0.5000	1.3333	0.0	2.2000	0.0
39	8.9000	7.6000	11.5000	11.0000	6.8000	5.0000
40	12.7500	11.9000	12.0000	13.0000	14.0000	17.0000
41	11.9000	14.9000	10.0000	6.3333	12.8000	9.3333
42	7.6000	7.4000	9.0000	10.6667	6.4000	5.3333
43	11.1000	11.3000	8.0000	12.0000	11.4000	14.6667
44	12.4500	12.6000	11.0000	11.3333	15.0000	9.0000
45	16.3500	15.0000	20.5000	21.6667	13.2000	10.3333
46	23.8500	23.2000	20.0000	25.0000	25.4000	31.6667
47	24.7500	27.5000	21.0000	17.6667	27.8000	18.3333
48	19.3000	18.3000	22.5000	19.6667	17.6000	22.6667
49	25.5000	30.8000	24.0000	32.2500	25.2000	28.0000
50	22.6000	26.3000	25.0000	30.7500	26.0000	28.6667
51	20.8000	17.1000	20.7500	22.5000	24.8000	12.3333
52	27.3000	26.5000	25.5000	26.5000	21.6000	24.3333
53	29.2500	32.1000	29.2500	31.7500	28.2000	25.6667
54	27.0000	21.7000	27.5000	24.7500	18.0000	22.3333
55	33.3000	30.7000	37.2500	35.7500	24.2000	25.6667
56	8.9500	5.5000	8.7500	7.7500	6.0000	8.3333
57	13.8500	12.5000	14.7500	15.5000	13.0000	11.6667
58	9.1500	5.5000	6.7500	11.2500	7.4000	5.3333
59	11.1000	8.3000	9.5000	12.5000	11.0000	7.6667
	N 20	N 10	N 6	N 5	N 5	N 3

TABLE 11

SUMMARY OF MEANS FOR ENROLLEES AND OTHERS BY THEORETICAL ORIENTATION ON PRE INSTITUTE QUESTIONNAIRE VARIABLES

VAR NO	Enrollees			Others			Total All
	Self-Concept	Clinical	Behavioral	Self-Concept	Clinical	Behavioral	Orientation
28	27.0714	26.3333	26.4286	25.5217	25.3333	26.2000	26.1607
29	5.9286	5.5556	4.0000	3.3478	4.6111	3.9000	4.2613
30	6.0714	10.6667	6.5714	7.8696	5.2222	5.8000	6.7658
31	11.8571	16.5555	10.4286	10.8261	10.2222	9.8000	11.0991
32	18.1429	17.4444	17.7143	16.3478	16.4444	15.6000	17.1622
33	23.7143	18.5555	19.2857	23.1364	23.8333	13.8000	21.8559
34	34.4286	33.4444	26.2857	14.4545	25.3333	24.9000	25.0721
35	29.1429	30.4444	15.2857	12.7273	25.4444	13.0000	19.5918
36	14.9286	20.3333	22.4286	37.1364	26.3333	28.3000	25.4324
37	63.6429	82.0000	80.8571	66.5454	74.4444	72.7000	69.7297
38	0.8571	1.0000	1.0000	1.0870	0.5000	0.6000	0.9375
39	7.5714	8.7778	9.8571	6.9545	8.5333	8.5000	8.0556
40	13.7857	11.8889	10.5714	14.3182	12.4667	13.8000	13.3111
41	12.6429	13.3333	12.8571	10.7727	11.2667	12.0000	11.6000
42	7.6429	7.3333	7.5714	7.6364	8.2667	8.8000	7.8222
43	11.6429	11.3333	10.0000	11.6818	10.9333	10.1000	11.2222
44	11.3571	12.7778	14.4286	11.1918	12.1333	12.1000	12.0222
45	15.2143	15.7778	17.4286	14.5909	16.8000	17.0000	15.8111
46	25.4286	23.2222	20.5714	26.0000	23.4000	23.9000	24.5333
47	24.5714	26.1111	27.2857	21.9545	23.4000	24.4000	23.7444
48	19.3571	18.5555	18.7143	16.8182	19.9333	18.4000	18.6889
49	28.1429	30.1111	21.8571	29.5217	34.7778	29.6000	29.4227
50	23.3571	26.4444	21.4286	25.9130	24.9444	24.4000	25.1856
51	15.0714	18.6667	29.7143	15.9565	16.3333	15.3000	18.1237
52	26.6429	27.0000	27.8571	27.6087	27.1667	25.0000	26.5361
53	29.5000	31.0000	30.5714	30.5652	30.1667	30.9000	30.1340
54	24.7357	22.5555	29.5714	25.7826	25.5000	24.3000	24.9278
55	31.6429	31.2222	35.5714	34.3478	32.0000	32.6000	32.5258
56	7.0000	6.8889	10.5714	9.9565	7.6567	6.9000	8.1546
57	12.7143	13.1111	15.1429	14.1739	13.8889	13.2000	13.7216
58	7.0000	8.1111	9.5714	9.0435	7.5556	6.2000	7.9278
59	9.1429	10.7778	11.4286	11.0870	11.5556	11.5000	10.8144
	N 14	N 9	N 7	N 23	N 18	N 10	N97

in the enrollee group favoring self-concept orientation to have more referrals than either of the other orientations. An average of 25.07 cases were tested during this month by the applicants. Among the enrollees, male psychologists did slightly more testing than female psychologists, and behaviorally oriented psychologists did considerably less testing than either their self-concept or clinical colleagues (26.28 versus 34.42 for self-concept and 33.44 for clinical orientations). A mean of 19.58 reports were written by the applicants for the month of February, 1967. A similar pattern to the findings on tests given is observed with the enrollee and other applicant groups. Individuals of the behavioral orientation tend to write fewer reports than do the other orientation groups (15.28 versus 29.14 for self-concept individuals and 30.44 for the clinical group).

For individual and group counseling sessions (variable 36) the mean number of such sessions for the total group was 25.43. Among the enrollee group female psychologists held considerably fewer group sessions than male psychologists (12.30 versus 21.30). In the other applicant category self-concept oriented individuals had a mean of 37.13 such conferences as against 26.33 for clinical orientation and 28.30 for the behavioral orientation groups. Variable 37 reports the means for conferences held during February, 1967. The mean for all applicants was 69.72 with individuals of a self-concept orientation holding lesser conferences than those in the other two groupings. Finally, in terms of research activities the mean for all applicants was .93. Little variation was seen between groups on this variable.

In summary, according to the Time Analysis Form the composite school psychologist applicant received about 22 referrals, tested about 25 cases, wrote about 20 reports, engaged in about 25 individual or group counseling sessions, held nearly 70 conferences with school and out of school people and did something connected with research once during the month.

Variables 39-48 report the means of the various scales included in the Psychological Practice Questionnaire. This questionnaire was concerned with the theoretical orientation which applicants and enrollees had on dimensions of diagnosis and treatment. Fourteen four alternative items were composed by the writer and Mr. Stephen Goodman dealing with alternative courses of action relating to a specific case or problem. One of these alternatives was clinical in nature, the others were considered self-concept, behavioral or eclectic in nature respectively. In other words each of three alternatives was clearly identified as being an appropriate choice for individuals subscribing to a specific orientation. The fourth alternative was simply a filler type of activity possibly used in many situations but not clearly related to an identifiable theoretical position.

The questionnaire called for a ranking of alternatives from 1-4 and these were then scored on the basis of a 1-3 point scale. Three points were awarded for the first choice, two points for the second choice, and one point for the third choice alternative. The fourth choice was not scored. As a result when the profile for clinical, self-concept, or behavioral protocols was summed up it yielded a quantifiable score which was then entered into the data as such.

The means which are reported on tables 10 and 11 are the means obtained on the ten scales of this questionnaire. Since the individuals were categorized originally on the basis of their preferential orientation on the theoretical questionnaire, one should expect to observe real differences between groups if there is a cognitive correspondence between theoretical orientation and diagnostic or treatment alternatives as obtained in the Psychological Practices Questionnaire. In other words, if a psychologist declares he has a self-concept orientation, he should choose (if he is cognitively consistent in his orientation) to interview a child through individual counseling rather than administer a Rorschach. What was theorized initially in this design was that school psychologists though not consistently applying a particular theoretical frame of reference, will be able to recognize certain diagnostic or treatment alternatives appropriate to their orientation.

This hypothesis was supported by the analysis of the means in table 11. For, there are clear trends in evidence which revealed that individuals who claimed to be of one orientation did show a preference for specific kinds of diagnostic tools or treatment alternatives. For example, both the enrollee and the other applicant groups who favored a self-concept orientation scored lowest on the clinical diagnosis and clinical total scales (variables 39 and 45). An opposite trend was discerned for the behavioral preference group on the behavioral categories (variables 41, 44, and 47). Thus, the direction indicated by the absolute values of the means by original theoretical orientation and within dimensions of the Psychological Practice Questionnaire provides some empirical validation for the notion that an avowed theoretical orientation does have some relationship to the alternatives selected and ranked within diagnosis and treatment categories.

Variables 49, 50 and 51 are the scores obtained on the Concept Check List Inventory. This particular inventory consisted of 51 concepts relating to phenomenological, clinical, and behavioral points of view. Some of the concepts related to theories, others to specific terminology used in diagnosis or treatment alternatives, and still others reflected approaches to psychotherapy. Each applicant was asked to rate each concept in a four point scale 1= highly useful, 2 = fairly useful, 3 = seldom useful, and 4 = not relevant. Approximately one-third of the total number of concepts related to a phenomenological point of view, one-third to a clinical position, and one-third to a behavioral frame of reference.

In view of the initial concern with the determination of a methodology for evaluating theoretical orientation in relationship to other test and behavioral variables, the Concept Check List was used as an alternate approach to this measurement problem. It was hoped that through the use of the Theoretical Orientation Questionnaire, the Psychological Practices Questionnaire, and the Concept Check List it would be possible to "triangulate" on the constructs involved and determine whether it was possible to evaluate individuals with psychological training in terms of a theoretical orientation.

Once again, the mean scores reported in table 11 refer to the scores obtained on each of the Concept Check List dimensions by individuals who had originally picked a given theoretical orientation. Variable 49 the clinical scale on the Concept Check List shows a mean of 34.77 for those who claimed to be in the clinical triad by their preference, a mean of 29.52 for the self-concept group and a mean of 29.60 for the behavioral group. Similar trends are noted for the Self-Concept dimension (variable 50) with the Self-Concept group scoring highest.

For variable 51, the behavioral scale, a marked high score is seen for the behavioral group of enrollees, but this same pattern does not hold for the other applicants. A word of explanation might be in order at this point. Possibly the reason for this particular difference might be found in the fact that individuals who ascribed to behavior modification principles and individuals who ascribed to Dewey's instrumentalism were both placed in the same behavioral triad. Many of the enrollees who were from the West Coast and somewhat familiar with the approach which would be taken in the institute chose these dimensions because of their familiarity and sympathy with behavior modification. On the contrary, individuals from the Mid-west and other areas who generally supported the experimental method in education and elected Dewey as one of their frames of reference probably were unable to identify the specific applications derived from learning theory vis-a-vis the instrumentalism-experimentalism approach.

The final set of variables (52-59) relate to the distribution of the psychologist's practice within the school and the community setting. Four areas of possible priority for school psychology focus were ascertained empirically from a group of teachers and school psychologists who were interviewed prior to the development of this questionnaire. These areas were: 1) services to the individual student, 2) services to the school as a whole, 3) services in research, and 4) services to the community. The group of teachers and psychologists were asked what they thought were the priorities of school psychological practice, what griped them about present services and what they ideally would like. Mr. Stephen Goodman and other graduate students at California State College, Hayward worked on the preliminary phase of this project. Subsequently, all of the suggestions and written comments were grouped together and from this the four major areas specified above were identified.

Items for each of the four groupings were placed together and each psychologist applicant was asked to rate each item in accordance with the real and ideal dimensions specified below.

Figure 5

INSTRUCTIONS FOR THE PSYCHOLOGICAL SERVICES QUESTIONNAIRE

We would like you to complete this questionnaire in the following manner. First complete column 1 according to how frequently the services seem to be performed. Then proceed to colum II indicating what you feel the priorty should be.

Column I	Column II
According to how frequently they are actually performed (Use the following scale)	According to what your order of priority would be if conditions were ideal (Use the following scale)
a. frequently	1. high priority
b. occasional	2. medium priority
c. seldom	3. low priority
d. never	4. not appropriate

Utilizing this format each applicant psychologist filled out the questionnaire. Both the real and ideal scores for each of the four areas were obtained by allocating the a-b-c-d rank and the 1-2-3-4- ranks a numerical equivalent on a four-point scale from highest priority (4) to lowest priority (0).

Inspection of the means of these variables by theoretical orientation indicate that there are only slight differences in the outlook regarding the services to individual children. Enrollees with a behavioral orientation had a higher priority for services to the school as a whole, whereas those of clinical orientation favored more individual services. Those enrollees with a behavioral orientation showed a higher priority for research and for services to the community.

4. Institute Evaluative Criterion Measures and Holland Vocational Preference Inventory Variables for Enrollees Only

Variables 68-84 are measures which were obtained only on the enrollees themselves. Figure 6 specifies the explanation of these variables, but a few more words may be relevant at this point. Variables 68-71 are scores obtained from an analysis of enrollee ratings of the institute procedures, consultants, materials, etc., at the mid-point and termination of the institute program. These ratings were structured in such a way that each item to be rated could be scored on a five-point scale. Thus it was possible to obtain mean rankings for various elements of the program as well as a total score related to the ratings of the enrollees of the institute. Figures 7 and 8 represent the composite evaluation profiles obtained both at the mid-point of the institute and at the end of the institute. Variables 68 and 70 are the sum total scores for all individual items.

As can be seen from an inspection of the variables 68-71, there was a general increase in the evaluation of the institute from the mid-point to the close. Male enrollees initially rated the institute format and content higher than female enrollees, but this situation was reversed at the end of the institute. The enrollees averaged 3.83 hours of preparation and study per day at the mid-point of the institute and 3.73 at the end. In comparisons by theoretical orientation, those who chose a clinical orientation initially appeared to rate the institute somewhat higher than those in the other two orientations.

Variables 72 and 73 are the final examination scores for the two major courses in the institute. Variable 72 was the final examination score for the Measurement and Appraisal of Social Interaction taught by Drs. Barclay and Catterall. Variable 73 was the final examination score for the course in Social Learning Theory taught by Drs. Goodwin and Garvey.

Variables 74-84 are mean scores obtained on the Holland Vocational Preference Inventory. These will not be discussed here but reserved for the following chapter.

Figure 6

INSTITUTE EVALUATIVE CRITERION MEASURES AND SCORES ON THE HOLLAND VOCATIONAL INVENTORY FOR ALL ENROLLEES

Variable No.	Explanation
68	Mid-Term Evaluation of the Institute by Enrollees
69	Amount of study time spent by enrollees indicated on Mid-Term Evaluation
70	Final Evaluation of the Institute by Enrollees
71	Amount of study time spent by enrollees indicated on Final Evaluation
72	Final Examination Score Measurement and Appraisal - Barclay and Catterall
73	Final Examination Score Social Learning Theory - Goodwin and Garvey
74	HOLLAND VOCATIONAL INVENTORY Realistic Score
75	HOLLAND VOCATIONAL INVENTORY Intellectual Score
76	HOLLAND VOCATIONAL INVENTORY Social Score
77	HOLLAND VOCATIONAL INVENTORY Conventional Score
78	HOLLAND VOCATIONAL INVENTORY Enterprising Score
79	HOLLAND VOCATIONAL INVENTORY Artistic Score
80	HOLLAND VOCATIONAL INVENTORY Self-Control Score
81	HOLLAND VOCATIONAL INVENTORY Masculinity Score
82	HOLLAND VOCATIONAL INVENTORY Status Score
83	HOLLAND VOCATIONAL INVENTORY Infrequency Score
84	HOLLAND VOCATIONAL INVENTORY Acquiescence Score

TABLE 12

SUMMARY OF ENROLLEE MEANS FOR INSTITUTE EVALUATIVE CRITERION MEASURES AND SCORES ON THE HOLLAND VOCATIONAL INVENTORY BY SEX AND THEORETICAL ORIENTATION

VAR NO	Males	Females	Total	Self-Concept	Clinical	Behavioral
68	67.1000	60.7000	64.9667	63.9286	66.1111	65.5714
69	3.6500	4.2000	3.8333	4.0000	3.7778	3.5714
70	69.2000	71.8000	70.0667	69.6429	71.8889	68.5714
71	3.5000	4.2000	3.7333	3.8571	3.7778	3.4286
72	79.0000	82.4000	80.1333	77.5000	85.2222	78.8571
73	67.1000	58.5000	64.2333	69.9286	58.3333	60.4286
74	3.1000	0.9000	2.3667	1.9286	2.3333	3.2857
75	6.0000	4.0000	5.3333	4.8571	5.4444	6.1429
76	9.5500	9.5000	9.5333	8.2143	10.6667	10.7143
77	1.7500	0.6000	1.3667	0.4286	2.0000	2.4286
78	4.9500	3.5000	4.4667	4.0000	5.0000	4.7143
79	6.0500	7.6000	6.5667	5.7143	8.7778	5.4286
80	10.0000	12.3000	10.7667	11.5714	12.3333	7.1429
81	6.7000	3.8000	5.7333	6.2143	4.1111	6.8571
82	9.4000	9.9000	9.5667	9.4286	9.5556	9.8571
83	4.0500	6.9000	5.0000	5.2857	5.5556	3.7143
84	11.9500	9.4000	11.1000	10.0714	11.7778	12.2857
	N 20	N 10	N 30	N 14	N 9	N 7

Figure 7
SUMMARY MID-INSTITUTE EVALUATION DATA

	Frequency					Understanding		Mean Males		Mean Fem.		Mean Total
	5 (Excellent	4	3	2	1 Poor)	Adequate	More	(N=20)	S.D.	(N=10)	S.D.	(N=30)
I. Course Objectives												
A. Culture	9	11	8	-	1	20	9	3.75	1.11	3.90	1.37	3.80
B. Intro. Soc. Lng.	18	10	2	-	-	26	4	4.55	.60	4.50	.70	4.53
C. Initial T. V.	6	15	7	1	1	23	7	3.90	.96	3.60	.84	3.80
D. Intro. Video T.	10	10	8	1	-	21	8	3.90	1.20	3.80	1.03	3.86
E. Reinforc. Paradigms	15	10	4	1	-	19	11	4.50	.68	3.90	.99	4.30
F. Operant Cond.	17	11	1	1	-	12	18	4.65	.48	4.10	.99	4.46
G. Philosphy and Couns.	7	10	11	2	-	24	6	3.80	.76	3.60	1.17	3.73
H. Methods of Beh. Ana.	20	9	1	-	-	7	23	4.70	.57	4.50	.52	4.63
I. Overview Sch. Psych.	7	5	6	8	4	23	7	3.20	1.36	2.90	1.52	3.10
J. Appl. Obs. Tech.	18	12	-	-	-	8	22	4.60	.50	4.60	.51	4.60
K. Intro. Strat. Int.	10	7	8	4	-	16	13	3.85	.98	3.30	1.70	3.66
L. Cult. Mech. Cont.	5	13	9	-	1	16	12	3.70	1.08	3.10	1.59	3.50
M. Sociom. Techn.	10	11	5	3	-	13	16	4.00	.97	3.50	1.58	3.83
N. Job Corps	-	3	9	10	8	24	6	2.40	.88	1.90	1.10	2.23
O. Dr. Krumboltz	3	8	11	5	3	26	4	3.25	.96	2.80	1.39	3.10
P. Dr. Patterson	29	1	-	-	-	27	3	4.95	.22	5.00	.00	4.96
Q. Research Proj.	7	9	4	-	-	2	18	3.40	1.60	1.50	2.41	2.76
II. Other												
A. Handout Mats.	4	13	12	-	1			3.85	.74	3.20	.91	3.63
B. Practicum	3	6	12	1	7			3.05	1.27	2.30	1.49	2.80
C. Group Experi.	1	7	15	-	6			3.00	1.16	2.40	1.26	2.80
D. Interaction with other Memb. Inst.	7	15	6	-	1			4.05	.68	3.30	1.63	3.80
E. Int. Staff	2	8	9	-	11			2.80	1.47	2.40	1.26	2.66
F. Planned Soc. Act.	6	6	11	2	2			2.95	1.50	3.40	1.57	3.10
III. Personal Factors												
A. Time Spent Study	-	2	4	22	2	(Refers to hrs.)		2.10	.55	2.40	.84	2.20
B. Time Spent Group	-	4	12	12	2			2.55	.60	2.70	1.15	2.60
C. Overall Comparison with Other Exper.	13	13	2	1	1			4.55	.60	3.50	1.17	4.20

Figure 8
FINAL INSTITUTE EVALUATION

	Frequency						Understanding		Means (N=10)		
	High 5	4	3	2	Low 1	N	Ade- quate	Need More	M	F	Total
I. Course Objectives											
A. Strategies of intervention	14	8	4	4	-	30	23	7	4.10	4.10	4.07
B. Methods of conducting assess.intv.	26	4	-	-	-	30	26	3	4.85	4.90	4.87
C. Methods of determining a strategy	24	5	1	-	-	30	18	11	4.70	4.80	4.77
D. Micro consulting model with video tape	18	8	3	1	-	30	18	11	4.45	4.40	4.43
E. Consultation and interview analysis with video tape	22	6	1	-	-	29	24	5	4.68	4.80	4.72
F. Research project	12	5	11	2	-	30	17	12	3.80	4.10	3.90
G. New school psychology model	9	12	9	-	-	30	21	8	3.90	4.20	4.00
H. Implementation school psych.model	9	10	11	-	-	30	15	14	3.90	4.00	3.93
I. Practice in conduct.behav.observa.	20	7	3	-	-	30	11	18	4.50	4.70	4.53
J. Small group disc. of research pap.	12	7	7	2	2	30	16	13	3.75	4.00	3.83
K. Dr. Hewett behav.engineer.classrms.	16	10	3	1	-	30	24	4	4.20	4.70	4.37
L. Dr. Holland vocational theory	5	15	12	12	2	30	22	7	2.55	2.80	2.63
M. Dr. Nixon hyperactive behavior	11	15	3	-	-	29	23	4	4.16	4.50	4.28
N. Dr. Beach group couns.with underach.	2	10	9	6	1	28	23	3	3.39	2.90	3.21
O. Dr. Varenhorst game theory	10	14	2	2	-	28	22	5	4.11	4.20	4.36
P. Dr. Gordon family counseling	20	6	-	3	-	29	26	3	4.30	4.89 (N=9)	4.48
Q. Dr. Lovaas autistic child	24	4	-	1	-	29	25	3	4.68	4.90	4.76
II. Other											
A. Handouts and reading material	19	2	8	-	-	29			4.32	4.50	4.38
B. Practicum meetings	16	2	8	3	-	29			4.16	3.90	4.07
C. Group experiences	14	3	12	-	-	29			4.16	3.90	4.07
D. Interaction with other memb.of inst.	16	8	3	-	2	29			4.21	4.30	4.24
E. Interaction with staff members	9	10	8	1	1	29			4.00	3.60	3.86
F. Planned social activities	11	4	12	-	2	29			3.74	3.80	3.76
III. Personal Factors											
A. Time spent reading or studying independent of class		1	6	21	2	30	(hours)		2.15	2.30	2.20
B. Time spent in informal group activities or discussion		2	13	14	1	30	"		2.35	2.90	2.53
C. In comparison with other aspects of your training how would you evaluate the overall impact of this institute?	23	6	1	-	-	30			4.75	4.70	4.73

Both examinations were prepared by the faculty members responsible for teaching the course. They were both structured essay examinations and graded by each faculty member for the portions of the examination which he wrote. The correlational relationships with these examinations will be discussed subsequently under another heading, but for the moment it is interesting to observe that females did better on the Barclay-Catterall examination, and males did better on the Goodwin-Garvey examination. Each of the examinations had a total of 100 points available. Comparisons of final grade examinations by theoretical orientations are also interesting to note, for individuals with a high clinical orientation seemed to do best on the Barclay-Catterall test, whereas individuals with a self-concept orientation excelled on the Goodwin-Garvey test. From these mean scores and the later observations relating to correlational relationships it appears probable that the two courses and their respective examinations reflect differential criteria and possibly personality differences in instructors. It was observed by the staff in reviewing these differences that the emphasis on the Barclay-Catterall course was more on the analysis and use of new appraisal instruments which still called for a somewhat traditional clinical evaluation, whereas the Goodwin-Garvey course was highly technical in nature requiring mastery of fundamental behavioral terminology and procedures.

5. Post Institute Questionnaire Variables

Figure 9 lists the variables 85-111. These are the same variables which are described in variables 33-59 earlier in this chapter. However, these scores are the post-institute scores obtained after the institute was finished. They will be reported in tables 13 and 14 for information purposes only. Individual variable comparisons at this point are out of order since the changes which took place from pre-testing to post-testing are discussed in a later chapter.

Figure 9

POST-INSTITUTE QUESTIONNAIRE VARIABLES

Variable No.	Explanation
85	POST TIME ANALYSIS: Number of referrals received Fall 1967 to date (October 1967)
86	POST TIME ANALYSIS: Number of cases tested October 1967
87	POST TIME ANALYSIS: Number of reports written October 1967
88	POST TIME ANALYSIS: Number of individual and group counseling sessions October 1967
89	POST TIME ANALYSIS: Number of conferences held October 1967
90	POST TIME ANALYSIS: Number of research activities October 1967
91	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Diagnosis Clinical Scale
92	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Diagnosis Self-Concept Scale
93	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Diagnosis Behavioral Scale
94	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Treatment Clinical Scale
95	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Treatment Self-Concept Scale
96	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Treatment Behavioral Scale
97	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Clinical Scale
98	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Self-Concept Scale
99	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Behavioral Scale
100	POST PSYCHOLOGICAL PRACTICE QUESTIONNAIRE: Total Eclectic Scale
101	POST CONCEPT CHECK LIST: Total Clinical Concepts Scale
102	POST CONCEPT CHECK LIST: Total Self-Concepts Scale
103	POST CONCEPT CHECK LIST: Total Behavioral Concepts Scale
104	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Individual Real
105	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Individual Ideal
106	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to School as Whole Real
107	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to School as Whole Ideal
108	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services in Research real
109	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services in Research Ideal
110	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Community real
111	POST PSYCHOLOGIST SERVICE QUESTIONNAIRE: Services to Community Ideal

TABLE 13

SUMMARY OF MEANS FOR POST-INSTITUTE QUESTIONNAIRE VARIABLES

VAR NO	Enrollees		Control A		Control B	
	Males	Females	Males	Females	Males	Females
85	22.5500	27.0000	29.8000	36.8000	20.6667	5.3333
86	18.5000	24.1000	15.2000	18.2000	16.3333	16.3333
87	12.1000	18.5000	14.0000	11.6000	12.6667	12.6667
88	15.4500	18.5000	3.8000	37.0000	5.3333	7.6667
89	65.4000	55.8000	60.4000	69.4000	64.6667	11.6667
90	1.1500	2.7000	1.6000	2.2000	3.6667	13.0000
91	5.7500	6.2000	8.8000	6.9000	7.3333	13.0000
92	9.6000	10.4000	14.2000	14.8000	11.0000	28.0000
93	19.4500	13.4000	11.2000	11.4000	14.0000	25.6667
94	5.4500	5.6000	8.6000	9.2000	11.0000	17.3333
95	8.4500	9.0000	9.4000	12.0000	9.6667	22.6667
96	17.1000	16.5000	12.8000	12.6000	13.0000	25.3333
97	11.2000	11.8000	17.4000	16.0000	18.3333	13.3333
98	18.0500	19.1000	23.6000	26.8000	20.6667	23.6667
99	35.4500	34.9000	24.0000	24.0000	27.0000	27.6667
100	19.3000	18.1000	13.9000	17.2000	17.3333	13.6667
101	18.1500	15.6000	26.2000	33.0000	23.6667	30.3333
102	19.6500	18.9000	26.2000	28.2000	22.0000	3.3333
103	37.0000	37.8000	24.4000	22.0000	19.6667	10.3333
104	24.5500	21.8000	24.6000	27.4000	22.0000	4.3333
105	28.6000	30.2000	29.8000	30.4000	26.0000	10.0000
106	23.8000	23.3000	22.6000	23.2500	14.3333	
107	32.2500	35.9000	34.0000	35.2500	29.3333	
108	6.6000	5.5000	7.4000	9.0000	6.0000	
109	14.8500	16.4000	15.0000	14.6000	11.6667	
110	7.2500	7.9000	7.2000	9.4000	6.6667	
111	9.8000	11.4000		11.8000	9.6667	
	N 20	N 10	N 5	N 5	N 3	N 3

TABLE 14

SUMMARY OF MEANS FOR POST-INSTITUTE QUESTIONNAIRE VARIABLES FOR ENROLLEES AND CONTROLS BY ORIGINAL THEORETICAL ORIENTATION

VAR NO	Enrollees			Control A	Control B
	Self-Concept	Clinical	Behavioral	Self-Concept	Self-Concept
85	27.1429	24.2222	17.5714	38.7143	20.6667
86	18.0000	22.0000	23.0000	19.2857	8.3333
87	14.3571	19.5555	7.1429	15.2857	8.6667
88	16.5714	11.6667	22.4286	24.0000	21.0000
89	60.7857	64.7778	61.7143	69.8571	91.3333
90	1.5714	1.4444	2.1429	2.5714	3.6667
91	5.7857	5.8889	6.1429	7.8571	6.0000
92	9.4286	10.3333	10.1429	13.8571	14.8000
93	18.3571	18.1111	19.0000	11.8571	12.4000
94	5.2357	5.6667	5.7143	9.4286	9.2000
95	9.1429	8.5556	7.7143	10.7143	10.6000
96	16.5000	17.1111	17.4286	13.0000	12.8000
97	11.0714	11.5556	11.8571	17.2857	15.2000
98	18.5714	18.5555	17.8571	24.5714	25.4000
99	34.7143	35.2222	36.4286	24.8571	25.2000
100	19.5714	18.6667	17.8571	17.2857	17.8000
101	18.6429	15.6667	16.7143	33.8571	23.9000
102	21.1429	16.8889	19.1429	30.1429	25.4000
103	36.4286	35.8889	40.7143	26.4286	16.0000
104	23.7857	22.6667	24.5714	28.1429	23.2000
105	28.3571	31.2222	28.0000	31.5714	26.4000
106	22.2857	23.7778	26.1429	25.1429	17.8000
107	31.8571	34.3333	35.5714	35.7143	30.8000
108	5.2857	6.0000	8.4286	9.0000	5.0000
109	15.7143	14.3333	16.0000	15.4286	11.6000
110	6.7857	8.4444	7.5714	9.4286	6.4000
111	10.5000	11.5556	8.4286	12.0000	10.8000
	N 14	N 9	N 7	N 7	N 5

Figure 10

SUMMARY APPLICANT CHARACTERISTICS AND DIFFERENCES BY THEORETICAL ORIENTATION

Item	Clinical	Self-Concept	Behavioral
School Assignment	Tend to be District Oriented		Tend to be Elementary Oriented
Credentials		Tend to hold more credentials	Tend to hold fewer credentials
Community		Tend to service smaller communities	Tend to service larger communities
Internship		Tend towards longer internships	Tend towards shorter internships
Membership in Professional Organizations	Closer identification with APA	Less identified with APA	
		Greater identification with APGA & State Guidance Associations	Lesser identification with APGA & State Guidance Associations
		Greater involvement with State School Psychology Assns.	
Course work	Lowest Undergraduate GPA	Most courses taken	Fewest courses taken
Experience			Least years of experience
Age	Tend to be Older		Tend to be Younger
Referrals		Tend towards more referrals	
Testing			Tend towards less testing
Report Writing			Tend towards fewer reports
Individual and Group Counseling		Tend towards the most counseling	
Conferences		Tend towards the least conferences	

Figure 10 -- Continued

Item	Clinical	Self-Concept	Behavioral
Clinical Diagnosis & Total Scales		Tend to be lowest	
Behavioral Diagnosis, Treatment and Total			Tend to be highest
Clinical Concept Check List	Tend to be highest		
Self-Concept Check List		Tend to be highest	
Behavioral Concept Check List			Tend to be highest
Services to School as Whole			Tend to be highest
Services in Research			Tend to be highest
Services to Community			Tend to be highest
Examination Barclay-Catterall	Tend to be highest	Tend to be lowest	
Examination Goodwin-Garvey	Tend to be lowest	Tend to be highest	

Part II. Correlational Relationships

In the process of analyzing the data from the institute several major correlational matrices were obtained. The first of these matrices, hereafter referred to as "A", correlated the 89 variables from the pre-testing instruments for all 111 completed cases. The second matrix, hereafter referred to as "B", was a correlation matrix of selected pre-institute variables with the first behavioral ratings obtained from the analysis of the video-tapes on the second day of the institute. This matrix was completed for the 38 participants and controls. The third matrix, hereafter referred to as "C", correlated pre-post measures for the same 46 participants and controls with behavioral ratings obtained on the field testing.[1] (See Appendix 3).

In a report such as this, it is obviously impossible to report all significant correlations. The writer has decided to report some general observations about selected variables, and to relegate the correlation matrices to a separate appendix. In this manner, the reader who wishes to obtain some general information will receive this from the following section. The reader more interested in specific comparisons and analyses may consult the appropriate appendix.

The general discussion here will center on the following problems: 1) demographic variables, 2) pre-test institute variables, 3) evaluation criteria, 4) pre-post comparisons with behavioral criteria. All correlations reported in the text of this report are significant at the .05 level or the .01 level. Since a variable number of cases were present

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1. Matrix "B" will be used in this discussion unless otherwise indicated.

in a number of items correlated, the exact number for any specific correlation may be found in the correlational matrices where it is reported in parentheses below the correlation.

1. Demographic Variables[2]

A question of interest to those who conduct training programs is to what extent variables of age, course-work completed, years of school experience etc., are related to personality and criterion variables. The grade-point average, which has long been regarded as a most important predictor of success in academic programs, had little meaningful relationship to other variables in these matrices. The undergraduate grade-point average correlated significantly only with one other variable i. e. the final examination in Social Behavioral Learning (.37) given by Drs. Goodwin and Garvey. The graduate grade-point average showed significant negative relationships with a number of behavioral rating categories, as well as a negative relationship with the social scale of the VPI (-.29). One can tentatively conclude from these relationships that the graduate grade-point average, far from predicting success in behavioral analysis, is actually negatively related to it.

The number of graduate courses taken as a preparation for school psychology correlated positively with the PPQ treatment self-concept scale and the CL self-concept scale (.30, .36). A negative correlation with the VPI social scale was seen (-.29). Thus one might state that the

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[2] Hereafter the various instruments will be abbreviated as follows:

VPI	Holland Vocational Preference Inventory
TA	Time Analysis Form
PPQ	Psychological Practices Questionnaire
PPI	Psychological Practices Inventory
CL	Concept Check List
BR	Behavioral Ratings

more courses taken as a preparation for school psychology, the higher the self-concept orientation, and the lower the social interests. A similar pattern emerges with correlations obtained for the total number of graduate courses taken in all areas, with these additional difference that total graduate courses correlate positively with the amount of time spent by enrollees in institute preparation. There are also negative relationships observed between total number of graduate courses taken and the VPI realism and masculinity scales (-.37, -38).

Age and years of school experience are other variables which could conceivably relate to personality and criterion outcomes in a study such as this one. The age of the individuals studied was related to years of experience as a teacher or counselor (.45), and to all years of school experience (.58). It was also related significantly to the CL clinical and self-concept scales (.30, .38), to the enrollees' final evaluation of the institute (.37), the examination in appraisal of social interaction (.47) and to the VPI self-control and infrequency scales (.40, .44). It was negatively related to the VPI masculinity scale (-.46).

Thus in summary, one could conclude that the grade-point averages are relatively useless in predicting approximation of behavioral criteria in an institute such as this. One could also note that scores on the VPI masculinity and social scales tend to decline in relationship to courses taken, and that a by-product of graduate education - at least in this sample - is movement towards a clinical, self-concept orientation, growth in self-control, more feminine interests, and decline in concrete realistic interests. Further, it is apparent that the older the enrollees were, the more they valued the experience of the institute and the more time they put in for study and preparation. These conclusions are somewhat contrary to what has ordinarily been assumed in most graduate training programs where heavy reliance has been placed on high grade-point averages and young candidates.

2. Pre-Institute Test Variables

This section will discuss the relationships found between the theoretical instruments administered to all applicants prior to the institute. Reference is made to 1) the Time Analysis Form (TA) which surveyed the manner in which the applicants spent their time during the month of February, 1967, 2) the Psychological Practice Questionnaire (PPQ), which obtained scores relating to clinical, phenomenological (self-concept) and behavioral alternatives towards diagnosis and treatment, 3) the Concept Check List (CL) referring to the usability of various clinical, phenomenological and behavioral terms in school psychology, and 4) the Psychological Practices Inventory (PPI) which surveyed attitudes, real and ideal towards various commitments in and out of the school system.

With regard to the Time Analysis Form, the number of referrals obtained was found to correlate positively with the number of cases tested (.37) and negatively with the PPI service towards the community (ideal) (-.39). The number of cases tested correlated positively with the number of reports written (.72). The number of individual and group counseling sessions indicated was negatively correlated with the PPQ diagnosis behavioral scale (-.32) and the PPQ total behavioral scale (-.31). There was a positive correlation with the PPQ clinical treatment scale. The number of conferences held by the applicants and enrollees correlated positively with the number of reports written (.33), the PPQ total behavioral scale (.31), the CL clinical and behavioral scales (.32, .31), the PPI services to the individual and community from the realistic point of view (.37, .39), and with the VPI conventional, enterprising and artistic scales (.35, .42, .31).

These relationships make a good deal of sense if one considers the present functioning of the school psychologist. For many school districts judge the adequacy of school psychological services in direct proportion to the number of cases tested and reports written. If a school psychologist is obtaining a number of referrals, he is also doing a good deal of testing, and consequently report-writing. However, it is apparent that this role model and function fits in more adequately with the clinical and possibly self-concept theoretical points of view than with the behavioral outlook. For the behavioral approach to school psychology emphasizes more conferring with teachers and school personnel and de-emphasizes the testing, report-writing and individual or group therapy sessions. For this reason the negative correlations obtained with behavioral measures suggest the validity of the inventories themselves from a construct validity point of view.

The Psychological Practices Questionnaire and the Concept Check List were two alternate methods of attempting to measure theoretical orientation. They will thus be discussed together at this point. Here, one is interested in determining the relationships between scale variables. Subsequently in this chapter the relationship to criterion variables will be discussed. It was hoped that if the instruments were valid from a construct point of view they should show appropriate correlations. This hope was substantiated.

The PPQ diagnosis clinical scale correlated negatively with the PPQ diagnosis self-concept (-.52), with the PPQ diagnosis behavioral scale (-.37), and with the CL self-concept and behavioral scales (-.45, -.37). The PPQ diagnosis clinical scale showed significant positive correlations with the CL clinical scale and the VPI social scale (.81, .32). In the first behavioral ratings, the PPQ diagnosis clinical scale correlated negatively with the frequency of structured explanation responses and the definition of the problem behavior (-.29, -.30). Similar results were obtained for the PPQ treatment clinical and PPQ total clinical scales with the addition that the PPQ clinical treatment scale also correlated with the number of reports written, and non-specific strategies implemented in the behavioral data.

These findings would suggest that both the PPQ and CL clinical scales were tapping similar areas with regard to diagnostic decision-making and utility of given terms. Applicants or enrollees who were high scorers on the clinical scales tended to be more social and artistic in their interests as measured by the VPI. With regard to behavioral categories, these same high scorers tended to manifest far fewer structuring responses or definition of problem-behavior responses in interviewing teachers. They also tended to utilize more non-specific strategies in specifying treatment alternatives.

The PPQ diagnosis and treatment self-concept scales, aside from the negative relationships already mentioned in regard to the clinical scales, shows a positive relationship to number of courses taken in school psychology (.30), and to the behavioral rating categories of structuring responses in explaining interviewing procedures (.30), and assessment of consequent conditions (.33). These scales show a negative relationship to years of experience as a teacher or counselor (-.31) and to all years of school experience (-.37).

These relationships might suggest that the self-concept orientation is primarily a by-product of graduate education. For the negative correlations to school experience would seem to indicate that individuals trained in school psychology more recently would tend to be higher on self-concept or phenomenological theory scales.

The PPQ diagnosis and treatment behavioral scales, aside from being negatively related to the clinical scales and some of the TA items, show a host of negative relationships to VPI variables including realism (-.51), intellectual (-.32), social (-.29), conventional (-.33), and masculinity (-.40) scales. There are also many positive correlations with behavioral rating dimensions specifically related to the behavioral approach such as assessment of antecedent conditions (.40), and sum of behavioral responses (.35).

These reported correlations tend to substantiate the fact that theoretical orientations do reflect differences in behavioral style. More of this will be discussed later on, but by way of commentary on these correlational relations, the writer would like to relate some empirical observations. Some ninety interviews with teachers were held by psychologists. In watching and listening to these ninety interviews, it was apparent that behavioral styles vary in accordance with some personality and theoretical variables.

For example, individuals who were high scorers on clinical preferences tend to establish and foster an air of mystery about their procedures.

They do not tend to structure the situation clearly for the teacher. They also tend to focus less on concrete strategies of remediation, and more on dynamic or unspecified assessment procedures. More often they appear to be probing teachers directly influencing the outcomes of teacher elaboration by their verbal and non-verbal cues. In one such interview, the psychologist who was high on clinical orientation appeared relatively non-involved until the teacher mentioned the fact that the subject under discussion drew pictures about other children. At this point, the psychologist abruptly leaned forward, showed evident interest and queried: 'What kinds of pictures?" Another example of this approach was a psychologist who was evidently forming an hypothesis about aggression as a symptom of home disturbance. The more he probed in this area, the more the teacher tended to use his terminology and elaborate on details which she appeared to believe would interest him. Clinicians also tend to foster a phenomenon which asserts non-verbally that they are an authority weighing evidence in some skillful but undetermined manner. For example clinicians (and others too, to some extent) tend to say: "Um hum" in a mysterious manner which conveys non-verbally the impression: "You have just said something most important, but I am not going to let you know what it is."

Individuals with a self-concept orientation tend to be more non-directive once they have structured the interview, allowing teachers to express their feelings and insights. The interview here often takes on more of the impression of a counseling interview with the teacher rather than a diagnostic information-seeking interview. As a result, very often the interviews of the self-concept group failed to issue in any definitive closure.

The behavioral-oriented psychologists were more matter of fact and dealt more specifically with behavioral phenomena and contingencies. Actually, the correlation relationships tend to show the greatest opposition between clinical and behavioral methods and strategies. There were also differences observed in lesser degree between the clinical and self-concept approaches, but there did not appear to be such an opposition between behavioral and self-concept groupings. Possibly this is due to the fact that both the clinical and behavioral approaches do have a rather clear-cut set of interviewing objectives relating to diagnosis and treatment, whereas the self-concept orientation, almost by definition, is opposed to diagnosis in the traditional approach. Clinical and behavioral approaches tend to be the polar opposites with the self-concept orientation reflecting a more "common-sense" and "pragmatic" outlook framed broadly within a counseling context.

The Psychologist Practice Inventory (PPI) included 39 items that subjects rated from 1 to 4. The items were divided into four sections including: 1) services to the student, 2) services to the school, 3) services to the community, and 4) research. Each applicant was asked to rate these items from a realistic point of view (the way the specific service is being done now,) and from an idealistic point of view (the way he might wish to see it be done). Marion (1968)[2] in a study of this inventory and other pre-institute instruments found that the ideal and real dimensions of the instrument correlated fairly highly. As a result, the discussion here will concern itself simply with some remarks about relationships observed between the realistic dimensions and some of the other variables.

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[2] Some of his findings relative to this instrument and other institute research will be reported in a following chapter.

Services to the individual student was found to relate significantly to the TA number of conferences (.37), to the VPI artistic scale (.38) and to other dimensions of the PPI i. e. services to the school as a whole (.53), to the community (.48) and to research (.35). Service to the school as a whole showed a positive correlation with the PPQ total clinical scale (.29), and a negative correlation with the PPQ total self-concept scale (-.29). Attitudes towards research correlated positively with the score obtained from the confidential evaluation form (.40), and services to the community as a whole showed a positive correlation with the TA number of conferences (.39).

In terms of the behavioral criteria, items from the PPI tended to show positive correlations with ratios relating to non-specific strategy over sum of strategy responses (.33) and negative relationships to behavioral strategy over sum of strategy responses (-.33).

3. Evaluative Criteria

There were a number of possible criteria for judging the effectiveness of this institute. Some were subjective and others were objective. Enrollee mid-institute and post-institute evaluations of the institute program were considered subjective criteria. Closing institute examinations were considered objective measures, and field-test behavioral ratings were considered the most objective criteria. Table 14 presents a correlation matrix with selected criterion and personality variables. It also provides information regarding the inter-correlations of the VPI within the scale itself and to selected criterion variables. Only the 14 behavioral ratio categories are included in this correlation matrix.

The following is a list of the variables as coded for Table 14:

1. Age
2. No. of Grad. Courses
3. No. of Cases Tested
4. No. of Reports Written
38. Mid-Term Eval.
40. Final Eval.
42. Final Exam. Meas.
43. Final Exam. Learn.
44. HVI Realistic
45. HVI Intellectual
46. HVI Social
47. HVI Conventional
48. HVI Enterprising
49. HVI Artistic
50. HVI Self Control
51. HVI Masculinity
52. HVI Status
53. HVI Infrequency
54. HVI Acquiesence
76. Rapport over Sum of Structure
77. Explanation over Sum of Structure
78. Behavioral Assessment over Sum Assessment
79. Neutral Responses over Sum of Assessment
80. Dynamic Assessment over Sum of Assessment
81. Behavioral Strategy over Sum of Strategy
82. Non-Specific Strategy over Sum of Strategy
83. Dynamic Strategy over Sum of Strategy
84. Sum of Structure over Total Responses
85. Sum of Assessment over Total Responses
86. Sum of Strategy over Total Responses
87. Sum of Behavioral Responses over Total
88. Sum of Neutral Responses over Total
89. Sum of Dynamic Responses over Total

TABLE 14

CORRELATION MATRIX SELECTED CRITERION AND PERSONALITY VARIABLES AS RELATED TO FIELD TEST DATA

	1	2	3	4	38	40	42	43	44	45	46	47	48	49	50	51	52	53	54	76	77	78	79	80	81	82	83	84	85	86	87	88	89
1		08	25	12	05	-09	-24	37	-15	07	12	08	03	-09	-08	18	07	-15	12	-22	-17	-18	23	-04	-25	-09	-03	-01	00	01	-22	26	0
2			06	-01	-14	00	-17	-10	00	-16	-29	-04	08	24	-05	-13	02	-25	15	04	-04	-13	26	-15	-27	-16	16	-13	27	-23	-19	24	00
3				-10	-18	00	-11	-04	-01	-02	-29	00	-08	04	-12	02	-13	05	05	04	14	-19	15	11	-09	-33	15	08	-08	00	-14	07	15
4					28	26	20	23	-37	-23	32	-21	-03	-11	00	-38	30	-15	-09	-03	09	03	-07	05	02	10	-05	-01	-13	23	05	-09	04
38						-13	24	25	21	18	12	21	-07	-23	03	05	-10	-18	15	-05	11	19	-33	20	-12	24	-09	13	02	-25	14	-22	12
40							09	-24	-07	-02	22	03	46	39	11	-20	27	16	28	-03	40	01	-10	14	32	39	-34	-21	-02	38	17	-24	11
42								15	-11	-22	18	00	05	00	12	-27	11	24	-20	06	-27	15	-40	37	51	17	15	-06	-16	36	13	-37	39
43									-14	-06	-09	-18	-13	-16	05	08	-10	-25	-13	06	-04	38	-25	-22	20	-43	-01	19	-18	01	34	-25	-21
44										71	16	57	22	-09	-14	39	55	-08	52	10	10	-20	-13	49	-29	28	32	28	-18	-15	-29	06	46
45											14	44	04	07	-17	23	-41	-26	58	04	12	-27	09	28	-29	06	22	40	-35	-03	-32	21	24
46												36	38	-01	-15	-18	10	-15	28	-25	28	-32	19	20	-12	30	-09	-08	-01	15	-22	13	20
47													50	24	-11	10	-37	01	62	-05	25	-11	-05	25	-43	31	-12	16	-02	-24	-11	02	18
48														44	-20	14	18	-07	47	-13	17	-15	01	22	-17	34	-31	-10	14	-09	-12	02	19
49															-08	-27	35	-03	41	18	-09	-06	05	01	-01	04	-06	21	-16	-06	-12	13	-01
50																-33	-07	66	-24	-14	17	13	-13	00	37	03	-22	-32	26	08	32	-30	-08
51																	-06	-18	15	-14	05	-05	01	06	-10	10	09	04	03	-11	-10	08	05
52																		-15	-13	00	-11	-10	12	-03	25	12	-14	-17	09	11	-10	13	-03
53																			-28	-05	-02	06	-20	20	31	19	-07	-32	18	22	13	-26	21
54																				-03	21	-31	19	19	-26	21	-02	17	-07	-15	-27	21	12
76																					31	40	-32	-21	09	-01	-28	50	-48	-01	36	-17	-39
77																						33	-23	-23	16	04	-36	06	-06	-01	52	-40	-35
78																							-79	-53	41	08	-23	17	-20	05	93	-75	-60
79																								-10	-46	-31	-01	-13	18	-08	-72	89	95
80																									-03	30	39	-10	08	02	-51	-02	91
81																										08	-07	-16	-13	45	51	-57	-12
82																											14	-17	01	24	05	-24	23
83																												-16	15	00	-38	07	57
84																													-79	-28	02	18	-27
85																														-36	-14	01	23
86																															19	-28	06
87																																-82	-63
88																																--	07
89																																	

Enrollees and controls (N varies from 30 to 49
df computed on 28

.361 = .05
.449 = .01

Note: Decimals omitted, and underlined coefficients are significant at .05 level or better.

It will be noted that the final evaluation of the institute by the enrollees correlates significantly with VPI scales of enterprising and artistic dimensions (.46, .39). Intercorrelations with the behavioral rating categories show many high positive and negative correlations indicating the consistency and opposition of behavioral, neutral and dynamic response categories (see variables 87, 88, and 89.)

In terms of correlations with other variables not reported in this matrix, it was found that the total evaluation of the institute program by the enrollees was related to the TA number of cases tested and reports written (.31, .41) and to CL clinical and self-concept scales (.47, .46).

With regard to the examinations themselves, the examination by Barclay and Catterall in assessment procedures correlated positively with the TA individual and group counseling sessions (.39) and the CL self-concept scale (.37). Goodwin and Garvey's examination in social learning theory correlated with the undergraduate grade-point average (.37) and the PPQ diagnostic and total self-concept scales (.53, .33). As has been mentioned earlier, in view of the low correlation between the two examinations (.15) it is most likely that the specificity of the learning examination in terms of new behavioral terms may have separated the enrollees in terms of their ability to memorize new terms and apply new principles.

4. Pre-Post Comparisons of Selected Variables with Behavioral Criteria

With regard to the behavioral ratings of video and audio tapes, many of the significant relationships to demographic pre-institute theoretical and VPI variables have been mentioned already. As was also mentioned earlier, two separate correlational analyses were completed in relationship to behavioral rating criteria. Matrix "B" was a correlation matrix of selected pre-institute variables with the first behavioral ratings obtained from the analysis of the video-tapes on the second day of the institute. Matrix "C" correlated certain pre-institute measures with the behavioral ratings obtained on the field testing.

The comparison of these two sets of correlations is useful for several reasons: 1) the pre-post comparisons - even with the institute treatment attenuating correlations - provide some measurement of the reliability of the instruments, and 2) the intercorrelations for the pre-institute systems questionnaires and initial behavioral data provide a predictor-criterion set of measurements relating both to initial performance and final performance.

Table 15 presents pre-post correlations between the PPQ and the CL dimensions. Table 16 reports intercorrelations between each of the dimensions of the PPQ and CL for both pre and post-testing.

As can be seen from Table 16, nearly all of the pre-institute scales correlate significantly with the post-institute scales with the exceptions of the PPQ diagnosis self-concept, treatment clinical and eclectic total scales. Though this is certainly not equivalent to Kuder-Richardson reliability coefficients, particularlyin view of the correction which would be necessary for the attenuating treatment intervention, these correlations would support a statement that self-concept diagnosis, clinical treatment and the placebo eclectic scale have a less consistent rationale than some of the other scales. This is consistent with the philosophical contention that phenomenological theory is by definition imprecise in diagnosis, and clinical treatment procedures are far more contextual and intuitive than behaviorally ordered.

TABLE 15

CORRELATIONS OF CLINICAL MEASURES PRE-TEST VERSUS POST-TEST

	PRE-TEST																		POST-TEST										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Age	# of Grd. Cs.	# of Cases Test. 2'67	# Repts. Writ.	Diagnosis Clinical	Diag. Self Concept	Diagnosis Behavior	Treat. Clinical	Treat. Self-Con.	Treat. Behavior	Total Clinical	Total Self-Con.	Total Behavior.	Total Com Sense	Total Clinical	Total Self-Con.	Total Behavior.	Diagnos. Clin.	Diagnos. Self-Con.	Diagnos. Behavior.	Treat. Clin.	Treat. Self-Con.	Treat. Behav.	Total Clin.	Total Self-Con.	Total Behav.	Total Com. Sense	Total Clin.	Total Self-Con.	Total Behavior.
1	12	18	17	06	-08	02	18	07	06	14	-01	02	07	20	28	-01	-02	13	-14	-14	$\underline{39}$	-11	-10	27	-14	01	$\underline{31}$	$\underline{32}$	-07
2		05	-01	01	05	-04	03	04	03	03	06	01	-18	23	21	04	05	-05	08	09	-18	08	09	-12	09	-12	$\underline{35}$	$\underline{40}$	26
3			$\underline{69}$	00	-07	-03	00	-11	-01	-01	-11	02	08	02	09	02	-14	13	03	-23	12	13	-23	14	08	-03	16	16	13
4				01	-13	12	01	02	01	00	-07	13	06	08	15	15	-06	-08	14	-26	-01	22	-19	-08	19	05	02	00	23
5					-24	$\underline{-28}$	35	-03	-14	$\underline{83}$	-17	-26	02	10	-19	-05	$\underline{44}$	$\underline{-28}$	-01	22	-13	-13	$\underline{41}$	-25	-07	-03	27	-04	13
6						-14	-02	$\underline{36}$	09	-15	$\underline{84}$	-03	-14	-03	13	-07	-18	26	$\underline{-34}$	-01	$\underline{28}$	-12	-12	$\underline{32}$	-27	20	11	$\underline{39}$	$\underline{29}$
7							-14	05	$\underline{37}$	-26	-06	$\underline{84}$	-08	-12	02	12	-23	-14	$\underline{43}$	-24	$\underline{-38}$	$\underline{38}$	$\underline{29}$	$\underline{30}$	$\underline{46}$	-05	$\underline{-42}$	$\underline{-41}$	$\underline{30}$
8								$\underline{-28}$	$\underline{-29}$	$\underline{81}$	-17	-24	-04	$\underline{28}$	11	-03	06	09	-14	27	-18	05	20	-01	-06	-18	04	-01	15
9									-19	-19	$\underline{81}$	-07	01	-10	04	-09	-20	10	-13	-04	$\underline{32}$	$\underline{-31}$	-15	22	-23	$\underline{32}$	09	24	$\underline{-30}$
10										-24	-05	$\underline{79}$	-24	-10	-02	21	00	-25	18	-14	-13	$\underline{30}$	-09	-25	26	02	-04	-09	19
11											-21	$\underline{-30}$	-02	21	-06	-04	$\underline{33}$	-14	-10	$\underline{31}$	-19	-07	$\underline{40}$	-17	-09	-12	19	-03	17
12												-06	-08	-08	11	-10	-22	22	$\underline{29}$	-03	$\underline{36}$	-25	-16	$\underline{32}$	$\underline{-30}$	$\underline{31}$	12	$\underline{38}$	$\underline{35}$
13													-19	-12	01	21	-13	-25	$\underline{38}$	-27	$\underline{-35}$	$\underline{45}$	-25	$\underline{-36}$	$\underline{46}$	00	$\underline{-30}$	$\underline{-33}$	$\underline{34}$
14														-08	-02	-09	07	18	-02	-06	24	-17	01	24	-10	-18	-03	-01	-17
15															$\underline{58}$	02	10	15	-04	19	07	-04	18	14	-05	$\underline{-35}$	$\underline{62}$	$\underline{38}$	07
16																$\underline{37}$	-06	$\underline{34}$	-19	$\underline{28}$	19	-11	14	$\underline{-31}$	-17	$\underline{-35}$	$\underline{53}$	$\underline{50}$	-10
17																	-21	-02	20	02	$\underline{-32}$	23	-12	-16	24	-06	01	06	$\underline{34}$
18																		-19	$\underline{-46}$	$\underline{36}$	-03	$\underline{-31}$	$\underline{82}$	-15	$\underline{-44}$	-12	23	-18	$\underline{29}$
19																			$\underline{-57}$	21	$\underline{42}$	$\underline{-47}$	01	$\underline{91}$	$\underline{-56}$	$\underline{36}$	$\underline{40}$	$\underline{48}$	$\underline{-51}$
20																				$\underline{-51}$	$\underline{-39}$	$\underline{72}$	$\underline{-59}$	$\underline{59}$	$\underline{94}$	-05	$\underline{-42}$	$\underline{33}$	$\underline{73}$
21																					-11	$\underline{-51}$	$\underline{82}$	11	$\underline{-55}$	$\underline{-35}$	$\underline{39}$	24	$\underline{-39}$
22																						$\underline{-60}$	-08	$\underline{75}$	$\underline{-52}$	-02	19	23	$\underline{-54}$
23																							$\underline{-50}$	$\underline{-61}$	$\underline{90}$	-07	$\underline{-29}$	-19	$\underline{72}$
24																								-03	$\underline{-60}$	$\underline{-28}$	$\underline{38}$	03	$\underline{42}$
25																									$\underline{-65}$	-27	$\underline{38}$	$\underline{45}$	$\underline{-62}$
26																										-05	$\underline{-40}$	$\underline{-29}$	$\underline{78}$
27																											$\underline{-38}$	-21	05
28																												$\underline{76}$	-21
29																													-07

N based on 46 - 49 .05 = .20
df computed on 45 .01 = .37

Note: Decimals omitted, and underlined coefficients are significant at .05 level or better.

TABLE 16

PRE AND POST CORRELATIONS ON PSYCHOLOGICAL PRACTICES QUESTIONNAIRE AND CONCEPT CHECK LIST

	POST TEST												
	1	2	3	4	5	6	7	8	9	10	11	12	13
PRE TEST													
1. Diagnosis Clinical	44	-28	-01	22	-13	-13	41	-25	-07	-03	27	-04	13
2. Diagnosis Self-Concept	-18	26	-34	-01	28	-12	-12	32	-27	20	11	39	-29
3. Diagnosis Behavioral	-23	-14	43	-24	-38	38	-29	-30	46	-05	-42	-41	30
4. Treatment Clinical	06	09	-14	27	-18	05	20	-01	-06	-18	04	-01	15
5. Treatment Self-Concept	-20	10	-13	-04	32	-31	-15	22	-23	32	09	24	-30
6. Treatment Behavioral	00	-25	18	-14	-13	30	-09	-25	26	02	-04	-09	19
7. Total Clinical	33	-14	-10	31	-19	-07	40	-17	-09	-12	19	-03	17
8. Total Self-Concept	-22	22	-29	-03	36	-25	-16	32	-30	31	12	38	-35
9. Total Behavioral	-13	-25	38	-27	-35	45	-25	-36	46	00	-30	-33	34
10. Total Eclectic	07	18	-02	-06	24	-17	01	24	-10	-18	-03	-01	-17
11. Check List Clinical	10	15	-04	19	07	-04	18	14	-05	-35	62	38	07
12. Check List Self-Concept	-06	34	-19	28	19	-11	14	36	-17	-35	53	50	-10
13. Check List Behavioral	-21	-02	20	02	-32	23	-12	-16	24	-06	01	06	34

N = 46
.05 = .28
.01 = .37

Note: decimals omitted, and underlined coefficients are significant at .05 level or better.

TABLE 17

CORRELATIONS BETWEEN PRE-INSTITUTE SYSTEM VARIABLES AND PRE-POST BEHAVIORAL RATING CATEGORIES

	Rapport over sum of Structure	Explana-tion over sum of Structure	Behav.Ass over Sum of Assess-ment	Neutral Resp.over sum of Assess.	Dynamic Assess.over Sum of Assess.	Behav. Strat.over sum of Strategy	Non-Spec. Strat.over sum of Strategy	Dynamic Strat.over sum of Strategy	Sum of Structure over Tot. Responses	Sum Assess. over Tot. Responses	Sum of Strat.over Total Responses	Sum of Behav. Re-spons.over Tot.Respn.	Sum Neutr. Responses over Tot. Responses	Sum Dynam. Respons. over Tot. Responses
Diagnosis Clinical	-07 (-03)	06 (-21)	13 (-26)	-16 (22)	09 (11)	-32 (01)	-09 (14)	-25 (11)	-28 (-14)	53 (01)	-43 (21)	01 (-22)	-18 (17)	19 (14)
Diagnosis Self-Concept	-00 (-19)	-04 (00)	07 (09)	-21 (-16)	20 (06)	11 (17)	-15 (-20)	21 (15)	19 (-02)	-29 (06)	12 (-07)	-09 (08)	-07 (-18)	19 (11)
Diagnosis Behavioral	18 (23)	06 (00)	-21 (43)	33 (-22)	-23 (-38)	17 (-02)	25 (-17)	-05 (-24)	16 (20)	-32 (-10)	26 (-15)	08 (-34)	24 (-15)	-38 (-40)
Treatment Clinical	-15 (-14)	-22 (-07)	-19 (-05)	02 (03)	13 (02)	-14 (-01)	17 (24)	14 (03)	-07 (-08)	12 (13)	-16 (-09)	-29 (-06)	12 (05)	16 (04)
Treatment Self-Concept	03 (01)	16 (01)	-01 (02)	07 (-09)	-08 (10)	27 (09)	-19 (-28)	-23 (09)	10 (-04)	-03 (12)	09 (-14)	12 (03)	00 (-11)	-12 (10)
Treatment Behavioral	18 (04)	07 (-09)	16 (07)	-01 (-08)	-13 (-00)	-06 (-24)	-02 (20)	22 (-21)	10 (19)	-06 (-21)	07 (03)	12 (01)	-01 (02)	-11 (-05)
Total Clinical	-14 (-11)	-08 (-18)	-03 (-20)	-07 (18)	12 (07)	-29 (-03)	05 (22)	-06 (10)	-22 (-15)	42 (09)	-37 (08)	-16 (-18)	-02 (15)	20 (10)
Total Self-Concept	01 (-11)	06 (01)	04 (07)	-09 (-16)	07 (10)	23 (16)	-21 (-29)	-00 (15)	18 (-03)	-20 (11)	13 (-13)	01 (07)	-05 (-18)	04 (13)
Total Behavioral	22 (18)	07 (00)	-04 (35)	18 (-25)	-19 (-22)	04 (-10)	11 (00)	08 (-31)	28 (20)	-29 (-17)	19 (-04)	07 (28)	18 (-16)	-30 (-28)
Total Eclectic	-12 (05)	-07 (31)	01 (-24)	-02 (22)	02 (08)	-04 (03)	05 (04)	-05 (04)	-17 (-10)	03 (-00)	04 (16)	03 (-13)	-07 (12)	05 (06)
Check List Clinical	11 (-06)	07 (24)	-04 (-27)	-23 (14)	33 (23)	-18 (-05)	-14 (28)	14 (-03)	24 (-22)	09 (07)	-18 (23)	-25 (-16)	-06 (02)	34 (24)
Check List Self-Concept	-15 (19)	03 (14)	08 (-28)	-06 (08)	00 (33)	-26 (-12)	-20 (35)	14 14	38 (-28)	-00 (22)	-26 (09)	-14 (-23)	13 (01)	-00 (37)
Check List Behavioral	-09 (-09)	-20 (-18)	15 (-02)	-06 (04)	-12 (-02)	14 (-40)	09 (11)	06 (29)	05 (02)	01 (02)	-05 (-09)	-03 (-12)	14 (11)	-13 (06)

Note: decimals omitted, and underlined coefficients are significant at .05 level or better. Parenthesis denotes post correlations.

Table 17 reports correlations between the pre-institute Psychological Practices Questionnaire and Concept Check List on the one hand, and the summary dimensions of the behavioral ratings on the other. Two sets of correlations are reported. The first set indicates the correlation between the various systems scales and the results of the first behavioral analysis of video-taping done on the second day of the institute. The second set of correlations (reported in parentheses) refer to correlations between the pre-institute systems variables and the behavioral ratings obtained on the field testing tapes.

Since the institute program intervened between the two sets of correlations it should be feasible to answer two questions through the inspection of these data:

1. What is the relationship of the two systems questionnaires to initial behavioral practice in psychologist-teacher referral interviews?
2. What changes occur between initial systems predictors and subsequent behavioral practice variables as a result of the intervening variable of the institute?

With regard to the first question, (first set of correlations) it would appear that the systems variables were initially related very highly to behavioral categories. Individuals scoring highly on the clinical scales tended to use fewer strategy responses and structuring responses. They tended conversely to favor assessment responses over other responses. The CL clinical scale showed significant positive relationships to both dynamic assessment responses and the total proportion of dynamic responses made.

Few significant relationships were observed for the self-concept scales. The PPQ self-concept diagnosis scale showed a significant negative relationship with total assessment responses. Thus the high scoring phenomenologist tended to use fewer assessment responses - in contrast with the clinician. On the CL a significant positive relationship was seen with number of structure responses made.

On the behavioral scales of the PPQ significant positive correlations are observed between the PPQ behavioral diagnosis scale and the proportion of neutral respones made in assessment, and proportion of structure responses over total responses. Significant negative correlations were observed between the PPQ behavioral scales and proportion of assessment over total responses and proportion of dynamic responses over total responses.

Thus in summary it would appear that high scorers on the clinical scales tend to make more assessment and dynamic responses while making fewer strategy and structural respones. High self-concept scorers do not favor assessment responses though they tend to make a number of structuring responses. High behavioral scorers tend to prefer neutral and structure responses and spend considerably less time on assessment and dynamic responses. In view of the fact that the behavioral rating categories were not devised until after the completion of the institute, and the behavioral concommitants of theoretical systems had been only speculated over, these kinds of data suggest strongly that cognitive systems related to theoretical points of view do issue in quite tangible behavioral outcomes. In short, these data would support the contention that the PPQ and CL are valid predictors of behavioral outcomes relating to clinical, self-concept and behavioral styles of school psychologists.

The second question is concerned with the possible changes observed between the systems variable and first video-taping behavioral criteria on the one hand and the systems variables and field-testing behavioral criteria on the other. An inspection of the compared coefficients of correlation variable by variable indicates that there are many dramatic changes. One observes that significant positive or negative correlations with the first video-taping data tend to be reduced to insignificant ones or even to changes in signs. For example, the earlier high correlation between the PPQ diagnosis clinical scale and assessment response declines from .53 to .01. Similarly, for the same variable one notes that the high negative correlation on proportion of strategy responses over total responses changes from a -.43 to a +.21. This would indicate to the writer that individuals with a high initial clinical orientation decreased the amount of their assessment responses and increased substantially the number of strategy responses.

Within the self-concept frame of reference there is a general decline in correlation coefficients as seen for pre-post comparisons of correlations for the self-concept scales and behavioral ratings. Conversely, there is a general increase in correlation coefficients for the behavioral scales. For example, on the PPQ diagnosis behavioral scale a change from -.21 to .43 is seen in relationship to the sum of behavioral assessment responses over total assessment responses, and a change from .33 to -22 in number of neutral responses over the sum of assessment respones. In summary then, changes in the correlation coefficients indicate rather dramatically changes in behavioral dimensions.

Part III. Factor-Analytic Studies of Applicants and Enrollees

The final section of this chapter relates to two factor-analyses which were completed at Stanford University for the writer. Since factor analysis and the obtaining of regression equations are primary derivations from correlational studies, it seems logical to include the results of these statistical operations at this point to effect some type of closure related to this long discussion of descriptive and correlational relationships.

1. Method

Two separate factor analyses were completed and a set of regression equations was obtained for each of the criteria of the institute. The first factor analysis was completed on 83 applicants to the institute where complete data was available and included 59 variables drawn from the pre-institute battery. These included the *Psychologists' Questionnaire*, the *Psychological Practices Questionnaire*, the *Time Analysis Inventory*, and the *Psychological Practices Inventory*. The second factor analysis was completed for the enrollees and active controls only (39 individuals) and included not only the pre-testing data cited above but also the post-test data on some of the instruments. A total of 64 variables were included in this analysis. Finally, regression equations were obtained for each of 18 possible criterion variables.

2. Findings

Table 18 reports 12 factors obtained after rotation on 97 available applicants. These 12 factors account for 61 per cent of the total variance. Additional factors were not analyzed since they accounted for less and less of the variance and analysis did not appear warranted. Loadings on each of the factors are reported where they are above .40. Descriptive names were given to the factors which were identified insofar as it was possible to extrapolate from the loadings.

TABLE 18

HIGHEST LOADINGS OF FACTORS AFTER ROTATION, 83 AVAILABLE APPLICANTS

Factor I (8.4% of Variance) Self-Concept Orientation		Factor II (7.6% of Variance) Unsophisticated School Psychology Preparation	
Pre-Test Self Concept Total	.91	No. Years as Elementary Counselor	.40
Pre-Test Self-Concept Treatment	.86	No. Grad. Courses Taken	-.81
Pre-Test Self-Concept Diagnosis	.74	Total No. of Grad. Courses Taken	-.81
Pre-Test Total Eclectic	.40	Total No. Years Exp. School Psychologist or Psychometrist	-.74
		No. Grade Courses for School Psych.	-.45
		Years of Experience in private practice	-.45

Factor III (6.3% of Variance) Age and School Experience		Factor IV (6.1% of Variance) Service Orientation	
Total No. Years of All School Experience	.90	Pre-Test Services to Community Real	.81
Total No. Years as Teacher or Counselor	.77	Pre-Test Services to School as a Whole Real	.78
No. Years as Secondary Teacher	.56	Pre-Test Services in Research Real	.72
Age	.56	Pre-Test Services to Individual Real	.68
No. Years as Elementary Teacher	.55	Pre-Test Services to Community Ideal	.42

Factor V (5.5% of Variance) Lack of Ancillary School Personnel		Factor VI (5.0% of Variance) Anti-Behavioral Orientation	
No. of Counselors and Guidance Workers in District	-.97	Pre-Test Total Behavioral	-.92
No. Years Experience as Administrator	-.96	Pre-Test Behavioral Treatment	-.80
No. Psychiatrists in School Dist.	-.94	Pre-Test Behavioral Diagnosis	-.80

Factor VII (4.8% of Variance) Clinical Orientation		Factor VIII (4.3% of Variance) Tradition Test Orientation	
Pre-Test Clinical Total	.93	No. of Cases Tested	.79
Pre-Test Clinical Treatment	.83	No. of Reports Written	.69
Pre-Test Clinical Diagnosis	.76	No. of Referrals Received	.68
		No. of School Social Workers in Dist.	.53
		No. Hearing Therapists in Dist.	.45

Factor IX (3.9% of Variance) Special Education Orientation		Factor X (3.4% of Variance) Unsophisticated Psychological Background	
No. Years Experience in Special Education	.56	Pre-Test Self-Concept Check List	.77
Research Services Ideal	.46	Pre-Test Clinical Check List	.58
No. School Psychometrists in Dist.	.45	Pre-Test Behavioral Check List	.41
		No. Speech Correctionists in Dist.	-.40

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TABLE 18 - continued

Factor XI (3.2% of Variance) Secondary Adult Orientation		Factor XII (3.0% of Variance) Unnamed	
No. Years Experience as Secondary Counselor	.82	Total Services Individual Ideal	.75
No. Years Hospital Experience	.54	No. School Doctors in District	.59
No. Individual and Group Counseling Experiences	.47	No. School Social Workers in District	.40
No. Years Experience as Secondary Teacher	.45	No. Years Experience as Elementary Counselor	.40
No. Research Activities	.41		
No. Years Experience as Elementary Teacher	-.46		

NOTE: Loadings below .40 not reported.

Total amount of variance accounted for by 12 factors .61%.

No. of variables 59 No. of cases 83.

TABLE 19

HIGHEST LOADINGS OF FACTORS AFTER ROTATION, 39 PARTICIPANTS AND ACTIVE CONTROLS

Factor I (12.76% of Variance Residual Clinical Orientation	
Post-Test Clinical Total	.84
Post-Test Clinical Diagnosis	.73
Post-Test Clinical Treatment	.62
Post-Test Behavioral Total	-.88
Post-Test Behavioral Diagnosis	-.83
Post-Test Concept Check List Behavioral	-.72

Factor II (11.2% of Variance) Original School Service Orientation	
Pre-Test Services to Community Real	.87
Pre-Test Services to Community Ideal	.73
Pre-Test Services School Real	.69
Pre-Test Services to Individual Real	.57
Pre-Test Services in Research Real	.54
Pre-Test Services to Individual Ideal	.53
Pre-Test Services School Ideal	.43

Factor III (9.2% of Variance) Original Clinical Orientation	
Pre-Test Clinical Total	.59
Pre-Test Clinical Treatment	.50
Pre-Test Clinical Diagnosis	.43
Pre-Test Self-Concept Total	-.90
Pre-Test Self-Concept Treatment	-.88
Pre-Test Self-Concept Diagnosis	-.60
Post-Test Total Eclectic	-.51

Factor IV (6.9% of Variance) Experience: Age & Yrs. of School Work	
Total No. of Years of School Exper.	.82
Total No. of Years as Teacher or Counselor	.70
Age	.58
Pre-Test Eclectic Total	.54
Pre-Test Concept Check List Behavioral	-.40

Factor V (5.9% of Variance) Experience: Graduate Education-Self-Concept Orientation	
Total No. of Courses Taken	.87
Total No. of Grad. Courses for School Psychology	.85
Pre-Test Self-Concept Check List	.76
Post-Test Clinical Check List	.68
Post-Test Check List Self-Concept	.60
Post-Test No. Indi. & Grp. Conf.	.47
Post-Test Services School as a Whole Ideal	-.40

Factor VI (5.1% of Variance) Clinical Group Orientation	
Pre-Test Total Clinical	.64
Pre-Test No. Individual and Group Counseling Contacts	.55
Pre-Test Clinical Treatment	.54
Pre-Test Clinical Diagnosis	.50
Post-Test No. Individual and Group Conferences	.44
Post-Test Total Services Individual Real	.43
Pre-Test Behavioral Total	-.85
Pre-Test Behavioral Diagnosis	-.70
Pre-Test Behavioral Treatment	-.64

Factor VII (4.9% of Variance) Post-Institute Time Allocation	
Post-Test No. of Cases Tested	.80
Post-Test No. of Reports Written	.80
Post-Test Time Analysis No. of Referrals Received	.65
Post-Test No. of Conferences	.53

Factor VIII (4.7% of Variance) Residual Self-Concept Orientation	
Post-Test Self-Concept Total	.93
Post-Test Self-Concept Diagnosis	.85
Post-Test Self-Concept Treatment	.62
Post-Test Check List Self-Concept	.51
Post-Test No. of Research Activities	-.43
Pre-Test No. of Referrals Received	-.40

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TABLE 19 - continued

Factor IX (4.1% of Variance) Research-School Services Ideal		Factor X (3.8% of Variance) Research-School Services Real	
Post-Test Research Services Ideal	.72	Post-Test Research Services Real	.82
Pre-Test Research Services Ideal	.65	Post-Test Services School Real	.82
Post-Test Services School Ideal	.58	Post-Test Services Community Real	.60
		Pre-Test Research Services Real	.51
Post-Test Services Individual Ideal	.40	Post-Test Services Individual Real	.48
Pre-Test No. of Research Activi.	-.61	Pre-Test No. of Research Activities	.43
		Post-Test Services Community Ideal	.42

Factor XI (3.0% of Variance) Traditional Test-Report Orientation		Factor XII (2.9% of Variance) Evaluation by Superiors	
Pre-Test No. cases tested	.84	Confidential Evaluation Form	.71
Pre-Test No. reports written	.84	Total No. of Years as School Psychologist	-.70
Pre-Test No. of Conferences Held	.45		
Pre-Test No. Referrals Received	.45		

Note: Loadings below .40 not reported.

Total amount of variance accounted for by 12 factors .75 per cent.

No. of variables 64

No. of cases 39

Tables 20 - 37 report the results of step-wise regression and multiple correlations for four of the evaluation criteria of the institute and the 14 summary behavioral rating categories. Variables used in this analysis refer to the pre-institute questionnaires and inventories plus the post-institute field testing behavioral data.

Inspection of these data supports previous findings. The final evaluation of the institute by the enrollees appears to have been related to their initial clinical orientation and years of counseling experience. The amount of time spent in study and preparation appears to have been related to attitudes towards the community, number of graduate courses taken in the past and testing and referrals obtained. The final examination scores appear to have been related to differential sets of variables. The Barclay-Catterall examination in appraisal of social interaction appears to have been related to factors of age, years of school experience and eclectic orientation. The Goodwin-Garvey examination in social learning principle seems to have been related to both an eclectic orientation and disposition towards consultation and conferences in the functioning of school psychologists.

The analysis of the behavioral ratings confirms the relationship of the theoretical paper-pencil questionnaires and inventories to behavioral categories. Behavioral assessment ratings are directly related to the PPQ treatment behavioral and total eclectic dimensions whereas non-specific and dynamic assessment categories have as their chief source of variance age and school experience variables. Similar findings are found in the strategy categories.

In the summary total categories weighing the proportion of structuring, assessment, and strategy responses to the total number of responses the clinical influence is seen as a chief source of variance and major correlation factor in the structure and assessment ratios whereas the behavioral preference is seen in the sum of strategy responses over sum of total responses.

TABLE 20

STEP-WISE REGRESSION

FINAL EVALUATION OF INSTITUTE BY ENROLLEES

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	Check List Clinical	.465	.216	.216	7.75
2	Total Years Experience as Counselor	.589	.347	.131	5.42
3	TA No. Reports Written	.636	.405	.057	2.52
4	PPQ Total Eclectic	.675	.456	.050	2.33
5	PPI Research Real	.710	.504	.048	2.32
6	Check List Self-Concept	.744	.554	.049	2.56
7	TA No. Cases Tested	.780	.608	.054	3.04
8	TA No. of Conferences	.799	.639	.031	1.80
* 9		.816	.666	.027	1.61
* 10		.844	.712	.046	3.04
11	TA No. Counseling Experiences	.856	.733	.020	1.38
12	PPQ Total Behavioral	.873	.763	.030	2.17

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 21

STEP-WISE REGRESSION

TIME SPENT BY ENROLLEES: FINAL EVALUATION

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPI Community Ideal	.550	.303	.303	12.17
2	Total No. of Grad. Courses Taken	.659	.434	.131	6.29
3	TA No. Cases Tested	.741	.550	.115	6.67
4	TA No. Research Activities	.794	.630	.080	5.46
5	TA No. of Referrals	.845	.714	.083	7.04
* 6		.869	.756	.041	3.90
* 7		.892	.796	.040	4.42
8	Confidential Evaluation Form	.910	.829	.032	3.94
9	PPQ Treatment Self-Concept	.923	.853	.024	3.35
10	TA No. of Conferences	.937	.878	.025	3.95
11	PPI Community Real	.947	.897	.019	3.34
12	PPQ Diagnosis Self-Concept	.954	.910	.012	2.36

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 22

STEP-WISE REGRESSION

FINAL EXAMINATION - BARCLAY-CATTERALL

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	Age	.471	.222	.222	8.01
2	PPQ Total Eclectic	.612	.375	.152	6.59
3	TA No. Counseling Sessions	.669	.448	.073	3.46
4	Total Years All School Exper.	.716	.513	.064	3.32
5	PPQ Diagnosis Self-Concept	.757	.573	.059	3.36
6	Age (Removed)	.757	.573	-.000	.00
7	Check List Behavioral	.825	.681	.108	8.16
8	PPI Research Real	.856	.733	.051	4.44
9	TA No. Reports Written	.874	.764	.031	2.94
10	PPQ Total Self-Concept	.892	.796	.031	3.24
11	PPQ Services School - Whole Real	.907	.823	.027	3.11
* 12		.929	.863	.039	5.52

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 23

STEP-WISE REGRESSION

FINAL EXAMINATION - GOODWIN-GARVEY

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	TA No. of Conferences	.563	.317	.317	13.02
2	PPQ Total Eclectic	.719	.517	.200	11.20
3	PPQ Diagnosis Self-Concept	.773	.597	.080	5.18
4	PPQ Diagnosis Clinical	.815	.664	.066	4.97
5	PPI Research Real	.846	.716	.051	4.38
6	PPI Services Individual Ideal	.866	.751	.034	3.20
7	Total Years Experience as School Psychologist	.885	.784	.032	3.34
8	PPI Research Real	.900	.810	.026	2.90
9	PPQ Diagnosis Behavioral	.924	.854	.044	6.05
10	PPQ Total Behavioral	.933	.871	.017	2.58
11	TA No. Counseling Sessions	.945	.893	.021	3.58
12	PPQ Treatment Behavioral	.948	.900	.007	1.24

TABLE 24

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF RAPPORT OVER SUM OF STRUCTURE

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
* 1		.626	.393	.393	17.48
* 2		.752	.566	.173	10.39
3	TA Research Ideal	.785	.617	.050	3.32
4	PPQ Diagnosis Clinical	.802	.644	.027	1.82
* 5		.816	.666	.022	1.54
6	Check List Self-Concept	.830	.690	.023	1.68
* 7		.846	.716	.026	1.93
8	PPQ Total Eclectic	.859	.738	.022	1.71
9	TA No. of Referrals	.870	.757	.019	1.49
10	PPQ Treatment Clinical	.884	.781	.024	1.97
*11		.898	.806	.024	2.19
12	Check List Behavioral	.906	.822	.015	1.41

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 25

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF EXPLANATION OVER SUM OF STRUCTURE

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
* 1		.434	.188	.188	6.27
2	Check List Behavioral	.614	.377	.189	7.90
3	PPQ Diagnosis Behavioral	.698	.488	.110	5.38
* 4		.756	.572	.084	4.75
5	PPQ Total Self-Concept	.807	.652	.079	5.27
6	TA Cases Tested	.842	.709	.056	4.28
7	Age	.861	.741	.032	2.63
8	No. of Graduate Courses Taken	.875	.766	.025	2.15
9	PPI Services School Whole Real	.892	.796	.029	2.74
10	TA No. Counseling Experiences	.910	.829	.033	3.49
*11		.918	.843	.013	1.48
12	TA Research Real	.926	.857	.014	1.61

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 26

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF BEHAVIORAL ASSESSMENT OVER SUM OF TOTAL ASSESSMENT

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPQ Treatment Behavioral	.429	.184	.184	6.11
2	PPQ Total Eclectic	.637	.405	.221	9.67
3	PPI Research Real	.734	.539	.133	7.22
4	PPI Services School Whole Real	.800	.640	.101	6.80
* 5		.838	.703	.062	4.83
6	TA No. of Conferences	.868	.753	.050	4.52
* 7		.883	.780	.026	2.50
8	Check List Behavioral	.896	.802	.022	2.31
9	Age	.912	.832	.029	3.33
10	Total Years School Experience	.933	.870	.038	5.35
11	PPI Services Community as Whole Ideal	.948	.899	.028	4.84
12	No. of Graduate Courses Taken for School Psychology	.960	.921	.022	4.56

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 27

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF NON-SPECIFIC ASSESSMENT OVER SUM OF ASSESSMENT

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value To Enter or Remove
1	Age	.494	.244	.244	8.73
2	PPI Community Services Ideal	.624	.390	.145	6.21
3	PPQ Total Eclectic Scale	.691	.477	.087	4.18
4	PPI Research Real	.757	.574	.096	5.42
5	PPQ Treatment Behavioral	.845	.714	.140	11.27
* 6		.878	.771	.057	5.50
7	Concept Check List Behavioral	.903	.816	.044	5.10
8	TA No. Referrals	.918	.843	.027	3.47
9	Confidential Evaluation Form	.931	.867	.024	3.46
10	PPQ Total Behavioral	.942	.888	.020	3.33
11	No. of Graduate Courses Taken School Psychology	.951	.905	.016	3.01
12	TA No. Cases Tested	.960	.921	.016	3.41

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 28

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF DYNAMIC ASSESSMENT OVER SUM OF ASSESSMENT

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	Total All Years School Experience	.454	.206	.206	7.03
2	PPQ Diagnosis Self-Concept	.621	.385	.179	7.59
3	PPQ Diagnosis Clinical	.723	.523	.138	7.24
4	PPI Research Ideal	.838	.702	.178	14.43
5	No. of Graduate Courses for School Psychology	.870	.757	.054	5.14
6	PPQ Diagnosis Behavioral	.887	.788	.031	3.23
7	PPI Community Services Real	.902	.814	.026	2.97
8	PPI Services School Whole Real	.925	.855	.041	5.72
* 9		.941	.886	.030	5.09
10	Undergraduate grade Point Average	.958	.917	.031	6.89
11	PPI Community Services Ideal	.971	.943	.026	7.92
12	TA Cases Tested	.978	.957	.013	5.06

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 29

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF BEHAVIORAL STRATEGY OVER SUM OF STRATEGY

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
* 1		.540	.292	.292	11.15
2	Total years all School Experience	.623	.388	.096	4.08
3	TA No. of Conferences	.685	.469	.080	3.80
4	PPI Services Individual Real	.763	.583	.113	6.55
5	Graduate Grade Point Average	.805	.648	.065	4.27
6	Check List Clinical	.848	.720	.071	5.65
7	PPI Services School Whole Ideal	.869	.755	.035	3.01
8	No. Graduate Courses in School Psychology	.898	.806	.051	5.30
* 9		.914	.836	.029	3.46
10	TA No. Reports Written	.930	.864	.028	3.77
11	TA No. Referrals Received	.947	.896	.032	5.28
*12		.960	.922	.025	5.27

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 30

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF NON-SPECIFIC STRATEGY OVER SUM OF STRATEGY

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	Total Years of Experience as a Counselor	.397	.157	.157	5.06
* 2		.535	.286	.128	4.68
3	PPQ Diagnosis Self-Concept	.629	.396	.110	4.56
4	TA No. of Reports Written	.689	.474	.077	3.56
5	Graduate Grade Point Average	.719	.517	.042	2.02
6	PPQ Treatment Self-Concept	.747	.558	.040	2.02
7	TA No. Research Activities	.775	.601	.043	2.30
8	PPI Services Individual Real	.799	.638	.037	2.05
9	TA No. Cases Tested	.812	.659	.021	1.17
* 10		.837	.701	.041	2.51
11	Total No. Grad. Courses Taken	.852	.726	.025	1.56
12	Check List Clinical	.876	.767	.040	2.80

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 31

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF DYNAMIC STRATEGY OVER SUM OF TOTAL STRATEGY

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPQ Total Self-Concept	.427	.182	.182	6.02
2	Confidential Evaluation Form	.562	.316	.133	5.09
3	Check List Behavioral	.605	.367	.050	1.99
4	TA Research Activities	.664	.441	.074	3.18
5	PPI Services School Whole Real	.702	.492	.051	2.34
6	PPI Services School Whole Ideal	.731	.534	.041	1.96
7	No. Grad. Courses School Psych.	.763	.582	.048	2.42
8	G. P. A. Graduate	.788	.621	.038	2.03
9	TA No. Counseling Experiences	.807	.651	.030	1.66
10	PPI Services Community Real	.819	.671	.019	1.07
11	PPQ Treatment Clinical	.836	.699	.028	1.59
12	Total Years Experience as Counselor	.857	.735	.036	2.18

TABLE 32

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF STRUCTURE RESPONSES OVER SUM OF TOTAL RESPONSES

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPQ Total Clinical	.409	.167	.167	5.43
2	PPI Services Individual Real	.564	.318	.151	5.77
3	PPQ Diagnosis Behavioral	.665	.442	.123	5.53
4	PPI Community Ideal	.714	.510	.067	3.32
5	TA No. Research Activities	.769	.591	.081	4.57
6	PPI Services School Whole Real	.824	.679	.087	6.01
7	PPI Services Community Real	.854	.730	.051	4.00
8	TA No. Counseling Experiences	.878	.771	.040	3.52
* 9		.899	.808	.037	3.68
* 10		.931	.867	.058	7.95
11	No. of Graduate Courses School Psychology	.948	.900	.033	5.70
* 12		.962	.925	.025	5.42

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 33

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF ASSESSMENT RESPONSES OVER SUM OF TOTAL RESPONSES

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPQ Total Clinical	.395	.156	.156	5.01
2	PPI Services Individual Real	.608	.369	.213	8.78
3	PPI Services Community Real	.666	.444	.075	3.37
4	TA No. Research Activities	.719	.517	.072	3.60
5	TA No. Counseling Experiences	.761	.579	.062	3.39
* 6		.790	.625	.045	2.69
7	Graduate Grade Point Average	.827	.685	.059	3.99
8	PPI Services Individual Ideal	.847	.718	.033	2.39
9	PPI Services School Whole Real	.871	.759	.040	3.23
* 10		.880	.775	.015	1.25
* 11		.880	.775	-.000	.00
12	TA No. of Reports Written	.890	.792	.017	1.48

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 34

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF STRATEGY RESPONSES OVER SUM OF TOTAL RESPONSES

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPQ Diagnosis Behavioral	.458	.210	.210	7.20
2	GPA Graduate	.534	.285	.075	2.72
3	Total No. Years Experience as Counselor	.606	.368	.082	3.27
4	Check List Clinical	.668	.447	.078	3.42
5	PPQ Total Eclectic	.746	.556	.109	5.67
6	TA No. of Referrals	.785	.616	.060	3.44
7	TA No. of Cases Tested	.818	.669	.052	3.35
8	Check List Behavioral	.844	.713	.043	3.04
9	PPQ Treatment Behavioral	.858	.736	.023	1.69
10	Total No. Years Experience as School Psychologist	.868	.753	.017	1.24
11	Total No. Years of All School Experience	.900	.810	.057	5.12
12	PPI Service Community Ideal	.922	.851	.041	4.43

TABLE 35

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF BEHAVIORAL RESPONSES OVER SUM OF TOTAL RESPONSES

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPQ Total Clinical	.470	.221	.221	7.67
2	PPQ Diagnosis Behavioral	.597	.357	.135	5.49
3	Confidential Evaluation Forms	.696	.485	.127	6.20
4	Graduate Grade Point Average	.762	.582	.097	5.57
5	PPI Services Individual Ideal	.798	.638	.056	3.56
6	PPQ Total Self-Concept	.828	.686	.048	3.40
7	Total Years Experience as Counselor	.847	.718	.031	2.34
8	PPI Research Real	.861	.742	.024	1.88
9	TA No. of Conferences	.876	.768	.026	2.14
10	Check List Self-Concept	.896	.804	.035	3.29
11	Age	.919	.844	.040	4.40
12	Total Years School Experience	.943	.890	.045	6.60

TABLE 36

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF NON-SPECIFIC RESPONSES OVER SUM OF TOTAL RESPONSES

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	PPQ Total Clinical	.486	.236	.236	8.37
2	PPQ Diagnosis Behavioral	.610	.372	.135	5.61
3	PPQ Total Self-Concept	.654	.428	.055	2.44
* 4		.737	.544	.116	6.12
* 5		.771	.594	.050	2.85
6	PPI Research Real	.802	.644	.049	3.04
7	PPI Community Ideal	.828	.685	.041	2.77
8	TA No. of Referrals	.854	.729	.044	3.27
9	Undergraduate G. P. A.	.877	.769	.039	3.29
10	Total No. of Grad. Courses Taken	.908	.826	.056	5.81
11	No. Grad. Courses in School Psych.	.926	.857	.031	3.77
12	Check List Clinical	.946	.895	.038	5.85

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

TABLE 37

STEP-WISE REGRESSION

BEHAVIORAL RATINGS: SUM OF DYNAMIC RESPONSES OVER SUM OF TOTAL RESPONSES

Step No.	Variable	Multiple R	R^2	Increase R^2	F Value to Enter or Remove
1	Total No. Years Experience as Counselor	.430	.185	.185	6.13
2	Confidential Evaluation Form	.524	.275	.099	3.22
3	PPI Services School Whole Real	.594	.353	.078	3.01
4	Check List Behavioral	.657	.432	.079	3.35
5	PPQ Diagnosis Self-Concept	.699	.489	.057	2.59
6	PPI Community Ideal	.748	.560	.070	3.54
7	TA No. of Referrals	.811	.657	.097	5.96
8	PPI Research Real	.834	.695	.038	2.50
* 9		.861	.741	.045	3.35
10	TA No. of Conferences	.901	.812	.071	6.85
* 11		.935	.875	.062	8.45
* 12		.947	.898	.023	3.71

* Relates to some teacher variables non-relevant to this analysis and inadvertently left in the matrix.

Summary and Conclusion

This chapter has reported the descriptive, correlational, and factor-analytic studies on applicants and enrollees to the 1967 School Psychology Institute at California State College, Hayward. One may characterize the applicants and enrollees as individuals who had grown into the role of school psychology, who had had a wide variety of previous experience within the school setting, and who were predominantly self-concept oriented in theoretical orientation. Their training had been more generally within education areas than in psychology. The influence of counseling theory and practice could be seen both in terms of theoretical orientation and preferences for organizations more generally related to counseling than psychology.

A number of correlational relationships were ascertained showing the influence of age, years of experience, types of experience, etc., on theoretical orientation, school psychology practice, and time allocation of duties. The relationship of these variables to a behavioral rating analysis showed clear trends relating psycho-dynamic approaches to dynamic behavioral trends.

The factor-analytic studies and the regression equations for differential predictors and criteria indicate that age, preparation, and theoretical orientation not only account for a considerable amount of the variance obtained, but are predictors related to differential criterion approximation.

CHAPTER V

CHARACTERISTICS OF THE HOLLAND VOCATIONAL PREFERENCE INVENTORY FOR ENROLLEES [1]

James R. Barclay and Timothy L. Roorda

The purpose of this chapter is to examine certain personality-vocational variables identified in the Holland Vocational Inventory with a number of test and behavioral variables collected in the course of the NDEA Institute for school psychologists. In order to better understand how to provide more effective training programs for school psychologists and to assist in predicting which individuals might have the highest probability of success in programs designed with specific criterion behaviors in mind, the writer wished to administer some type of instrument which would provide both some personality characteristics in terms of personality and vocational variables, and some indication of what might be termed the "environmental press."

As has been described in earlier chapters, this institute was concerned with the development and field testing of a social learning model for school psychology. The writer has pointed out in the first two chapters of this report that the social learning model fits well into the profession of school psychology. In applying social-learning to the school situation, the teacher is of prime importance and the school psychologist's job is to work directly with the teacher in determining approaches to individual remediation. Since the teacher is in the best position to apply behavior modification techniques, in-service training becomes a very important function of the school psychologist. Again, the philosophical basis for the social learning model is that human behavior is learned and maintained through: 1) principles of learning and reinforcement, and 2) social pressures which establish criteria of effective human behavior.

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[1] This chapter draws upon some of the thesis written by Timothy L. Roorda, entitled: Characteristics of the Holland Vocational Preference Inventory and Other Selected Variables for a Group of School Psychologists, unpublished master's thesis, California State College, Hayward, 1968, under the direction of the writer.

Rationale

If the above statements are true of the learning of children, then they have equal import on the learning experiences of individuals such as school psychologists. If, as seems to be indicated, school psychology may utilize the social learning model to a much greater extent, than one of the central concerns of the trainers of school psychologists would appear to be a study of the effect of "environmental press" on the formation of school psychologists. By examining the psychologists' methods of dealing with interpersonal and environmental problems, a systematic training approach might be facilitated.

The Concept of Environmental Press

The origin of the concept of "environmental press" may be found in the effort to determine more adequate predictors and criteria of effective collegiate behavior. Pace and Stern (1958), Thistlethwaite (1960), Holland (1959, 1960, 1965, 1966), and Astin (1965) all studied the means whereby the environment shapes the behavior and interests of those individuals within it.

Astin (1965) compared 1,014 colleges and universities using an environmental assessment technique and a number of freshmen input factors. He obtained various indices describing the colleges and universities in terms of a set of scales. His findings confirmed the suspicion that institutions differ in relationship to their pursuit of excellence, criteria of assessment, faculty expectations, and the aspirations of the entering students.

In a study of college-bound youth, Holland (1966) tested a classification scheme for the Holland Vocational Preference Inventory. He found that his classification systems did, in fact, differentiate between vocational preferences obtained prior to entering collegiate studies and was confirmed by individuals in these same fields in the following fall. From these findings it appears that differential environmental forces exist at the end of high school which are identifiable with similar thrusts in the college and university environment.

Both Holland and Astin have indicated that differences were found, but no theories were presented regarding the initiation and maintenance of these environmental presses. They indicated that freshmen entering college already have a definable profile of vocational interests which relate to personality characteristics. These environmental presses can be better understood by a consideration of social-behavioral learning theory. In essence, what is under consideration is the means whereby cultural transmission takes place. Cultural mechanisms such as the family, law, religion, mass media, and education are instrumental in the transmission of cultural presses.

The Holland Vocational Preference Inventory

The Holland Vocational Preference Inventory is based on John Holland's theory of occupational choice, utilizing constructs from sociology, psychology, psychiatry and test construction (Holland, 1965). He has described the underlying theory as follows:

> ... at the time a person chooses a vocation, he is the product of his heredity and a variety of environmental forces including peers, parents, and other significant adults, social class, American culture, and the physical environment. Out of his experiences he develops a hierarchy of orientations for coping

> with environmental tasks: this herarchy may be referred to as the pattern of personal orientations. Each of these orientations is related to a particular set of abilities. The person making the vocational choice in a sense "searches" for those environments which are congruent with his personal orientations. (Holland, 1962).

It may be said, therefore that due to the environmental press related to patterns of common interest and similar personality characteristics, individuals with these similar characteristics may tend to be successful in similar types of occupations. Therefore, an individual's occupation may form the basis of various assumptions about him.

In 1959, Holland identified six personality characteristics as Motoric, Intellectual, Supportive, Conforming, Persuasive and Esthetic. Based on information from the literature on interests and personality and on his own counseling experience, he more recently altered the personality characteristics to Realistic, Intellectual, Social, Conventional, Enterprising, and Artistic. The degree to which an individual is similar to a particular personality model is called his "personal orientation," while his preference for certain aspects of all of the models is referred to his"pattern of personal orientation." Individuals who have similar patterns of personal orientation are said to be in the same "class." This differs from socioeconomic level in that the basis of classification is behavioral patterns and personality traits which are common to their members (Holland, 1964).

The development of Holland's Vocational Preference Inventory (VPI) has taken the instrument through numerous revisions which are explained in the manual (1965). The instrument is essentially a list of occupational titles from which the subject indicated which occupations he likes or dislikes. From the pattern of his answers, a pattern of personal orientations is derived. In recent studies which were reported by Holland (1966), the subject was the verification of a classification scheme based on the VPI. The following scales were used to generate scores for each:

Scale	Code No.	Preference for:
Realistic	1	technical and skilled trades
Intellectual	2	scientific occupations
Social	3	teaching and helping occupations
Conventional	4	clerical occupations
Enterprising	5	supervisory and sales occupations
Artistic	6	artistic, musical, and literary occupations

It was found that an effective coding method would be to cite the code number of the highest score first, the next highest second, and the third highest third. In addition to the six scales listed above, the VPI also includes the following scales:

Scale	Code No.	Indicates:
Self-control	7	control over one's behavior
Masculinity	8	masculinity-femininity
Status	9	desire for status
Infrequency	10	maladaptive interest in vocations
Acquiescence	11	tendency to say "yes"

In his "Experimental Classification for Vocational Choices and Occupations," Holland (1966) codes the following occupations as "36"; Clinical psychologist, Psychiatrist, Elementary school teacher, as well as other related types of occupations. On the other hand, he codes a variety of counselors as "35". From this classification, the results of this study should show that the enrollees of the institute for school psychologists will fall somewhere within this type of code framework.

By observation of the actual codes generated by school psychologists of various theoretical orientations, it may be possible to determine whether certain types of codes on the VPI are typically associated with the various orientations. At the same time it may be possible to pinpoint differences by sex or other background data.

The Holland Vocational Preference Inventory was selected for administration in this institute because it: 1) appeared to tap indices of the environmental press, 2) was relatively free from "Psychological" constructs often presented to psychologists, and 3) appeared relevant to the overall goals of the institute in terms of prediction of effective models of personality for school psychology work.

Procedures

The Holland Vocational Preference Inventory was administered during the course of the Institute. Scores on each of the inventory's dimensions were correlated with all other pre-institute, post-institute and behavioral assessment data. The correlations were obtained on the Stanford University computer through the services of the Stanford Research and Development Center. A variable correlation format was used.

In addition to the reporting of the correlations obtained that were significant, tests of significance of difference were done using the "t" test as a two-tailed test of difference. Individuals were separated into sex groupings and theoretical preference groupings as indicated on their initial choices in the Theoretical Orientation Questionnaire. Thus, the means and standard deviations for enrollees who categorized themselves as clinically oriented, phenomenologically oriented, or behaviorally oriented on their initial application materials was used as the criterion for data analysis. It was recognized in the use of the "t" statistic for analysis of differences that the total number of cases in some instances was very small. Therefore, the results in this study are to be construed as limited. However, in view of the unusual opportunity to examine correlational relationships to a vast array of behavioral and theoretical instruments, both the correlational and testing of significance of difference appear warranted and justified. Two major questions are posed:

1. What are the significant correlational relationships between the HVPI and an array of other test and behavioral variables?
2. What differences, if any, emerge as a function of sex or theoretical orientation criteria?

Results

The results of the data analysis will be discussed in this section. In the first part, there will be a discussion of various descriptive and assessment variables which correlated significantly with the individual scales of the Holland Vocational Preference Inventory. The second part will deal with the statistical differences between groups of psychologists as related to theoretical orientation and sex differences.

Significant VPI Scale Correlations

The following section will consider the descriptive and assessment variables which correlate with the various scales of the Holland Vocational Preference Inventory at the .05 level of significance or better.[1]

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[1] Level of significance at .05 level = .29
Level of significance at .01 level = .43

Tables one through eleven list the variables which correlate significantly with each of the eleven scales of the VPI.

TABLE 1

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI REALISTIC DIMENSIONS - ALL ENROLLEES

VPI REALISTIC	
VPI Intellectual	71
VPI Conventional	57
VPI Status	55
VPI Acquiescence	52
BR Ratio of Dynamic Assessment to Sum of Assessment	49
BR Sum of Dynamic Responses to Sum Total	46
VPI Masculinity	39
PPQ Total Common Sense (Eclecticism)	38
BR Assessment - Intervening Variables	35
BR Strategy - Non-behavioral Change	35
BR Ratio of Dynamic Strategy to Sum of Strategy	32
BR Assessment - Dynamic Interpretation	32
BR Sum of Behavioral Responses to Sum Total	-29
BR Assessment - Consequent Conditions	-32
PPQ Total Behavioral Scale	-35
BR Strategy - Behavioral Change	-35
BR Assessment - Actions Taken	-37
Number of Graduate Courses	-37
PPQ Diagnosis - Behavioral Scale	-51

TABLE 2

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI INTELLECTUAL DIMENSIONS - ALL ENROLLEES

VPI INTELLECTUAL	
VPI Realistic	71
VPI Acquiescence	58
VPI Conventional	44
BR Ratio of Structure to Total Responses	40
BR Structure - Rapport	34
BR Structure - Target Behavior	31
PPQ Total Common Sense (Eclecticism)	30
BR Ratio of Behavioral Strategy to Sum of Strategy	-29
Evaluation Time Spent - Mid-term	-30
PPQ Diagnosis - Behavioral	-32
BR Sum of Behavioral Responses to Sum Total	-32
BR Ratio of Assessment to Total Responses	-35
BR Assessment - Consequent Conditions	-36
BR Strategy - Behavioral Change	-39
VPI - Status	-41

TABLE 3

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI SOCIAL DIMENSIONS - ALL ENROLLEES

VPI SOCIAL	
VPI Enterprising	38
VPI Conventional	36
BR Strategy - Non-specific Data	36
Years of Experience - Teacher or Counselor	35
PPQ Diagnosis - Self Concept	33
PPI Services to the Individual Student - Idealized	33
Number of Graduate Courses	32
All School Experience	32
PPQ Diagnosis - Clinical Scale	32
PPI Community Services - Realistic	30
BR Ratio of Non-specific Strategy to Sum of Strategy	30
Number of Graduate Courses in School Psychology	-29
Graduate Grade Point Average	-29
PPQ Diagnosis - Behavioral Scale	-29
BR Assessment - Definition of Behavior	-47

TABLE 4

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI CONVENTIONAL DIMENSIONS - ALL ENROLLEES

VPI CONVENTIONAL	
VPI Acquiescence	62
VPI Realistic	57
VPI Enterprising	50
VPI Intellectual	44
PPI Importance of Research - Realistic	43
BR Assessment - Behavioral Interpretation	39
BR Assessment - Summary	39
PPQ Treatment - Behavioral Scale	38
CL Behavioral Scale	37
PPI Services to the School as a Whole - Realistic	36
VPI Social	36
TA Number of Conferences	35
BR Strategy - Non-specific Data	34
BR Ratio of Non-specific Strategy to Sum of Strategy	31
BR Structure - Target Behavior	31
BR Strategy - Behavioral Change	-29
PPQ Diagnosis - Behavioral Scale	-33
VPI Status	-37
BR Ratio of Behavioral Strategy to Sum of Strategy	-43

TABLE 5
SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI ENTERPRISING DIMENSIONS - ALL ENROLLEES

VPI ENTERPRISING	
VPI Conventional	50
VPI Acquiescence	47
Enrollee Final Evaluation	46
VPI Artistic	44
CL Clinical	43
TA Number of Conferences	42
BR Strategy - Non-specific Data	42
VPI Social	38
BR Ratio of Non-specific Strategy to Sum of Strategy	34
PPI Importance of Research - Realistic	32
PPI Services to the School as a Whole	31
CL Self Concept	29
BR Assessment - Rewards and Punishments	-29
BR Ratio of Dynamic Strategy to Sum of Strategy	-31
BR Strategy - Non-Behavioral Change	-40

TABLE 6

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI ARTISTIC DIMENSIONS - ALL ENROLLEES

VPI ARTISTIC	
VPI Enterprising	44
VPI Acquiescence	41
Enrollee Final Evaluation of Institute	39
VPI Status	35
PPI Number of Conferences	31
BR Strategy - Non-behavioral Change	31

TABLE 7

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI SELF-CONTROL DIMENSIONS - ALL ENROLLEES

VPI SELF-CONTROL	
VPI Infrequency	66
Age	40
BR Ratio of Behavioral Stategy to Sum of Strategy	37
BR Sum of Behavioral Responses to Sum Total	32
BR Sum of Neutral Responses to Sum Total	-30
VPI Masculinity	-33
PPI Services to the School as a Whole	-34
PPI Importance of Research - Realistic	-36
PPQ Treatment - Behavioral	-39
BR Structure - Rapport	-43
BR Strategy - Non-behavioral Data	-58
CL - Behavioral	-64

TABLE 8

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI MASCULINITY DIMENSIONS - ALL ENROLLEES

VPI MASCULINITY	
PPQ Total Common Sense (Eclectic)	43
VPI Realistic	39
BR Assessment - Dynamic Interpretation	39
PPI Services to the Community - Realistic	33
CL - Behavioral	33
BR Assessment - Actions Taken	-31
PPI Services to the Individual Child - Idealized	-32
CL - Self Concept	-33
BR Diagnosis - Behavioral	-33
VPI Self-Control	-33
BR Strategy - Modeling/Role Playing	-35
Number of Graduate Courses	-38
Age	-46

TABLE 9

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI STATUS DIMENSIONS - ALL ENROLLEES

VPI STATUS	
Time Spent Total	37
VPI Artistic	35
Number of Graduate Courses	30
TA Number of Referrals	-32
PPI Services to the Individual Child - Idealized	-35
VPI Conventional	-37
BR Structure - Target Behavior	-40
VPI Intellectual	-41
BR Strategy- Non-behavioral Change	-51
VPI Realistic	-55

TABLE 10

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI INFREQUENCY DIMENSIONS - ALL ENROLLEES

VPI INFREQUENCY	
VPI Self-Control	66
TA Number of Cases Tested	46
Age	44
TA Number of Reports Written	40
Years of Experience as a Counselor or Teacher	37
PPQ Diagnosis - Behavioral	37
Years of All School Experience	35
TA Number of Referrals	34
Time Spent - Mid-term Evaluation	34
BR Ratio of Behavioral Strategy to Sum of Strategy	31
BR Strategy - Modeling/Role Playing	30
CL - Behavioral	-31
BR Structure - Rapport	-31
BR Ratio of Structure to Total Responses	-32

TABLE 11

SUMMARY OF SIGNIFICANT CORRELATIONS FOR VPI ACQUIESCENCE DIMENSIONS - ALL ENROLLEES

VPI ACQUIESCENCE	
VPI Conventional	62
VPI Intellectual	58
VPI Realistic	52
VPI Enterprising	47
VPI Artistic	41
PPI Interest in Research - Realistic	32
BR Assessment - Summary	31
PPQ Total Clinical	31
BR Strategy - Behavioral Change	-30
BR Ratio of Behavioral Assessment to Sum of Assessment	-31
PPQ Total Behavioral Scale	-33
PPQ Diagnosis - Behavioral	-40

VPI Realistic (Table 1)

The Realistic scale correlates in a high positive direction with the Intellectual, Conventional, Status, Acquiescence and Masculinity scales of the VPI. The paper and pencil measure of Common Sense (Eclecticism) also correlated quite highly with the Realistic scale. On the behavioral rating measures, assessment of intervening variables and a dynamic interpretation showed a high positive correlation, while assessment of consequent conditions and actions taken were negatively correlated. Non-behavioral strategy showed a positive correlation, while behavioral strategy was negative. All of the rest of the significant correlations with the performance measures also indicated a positive relationship with a clinical type of orientation. It was also interesting to note that the PPQ measure of behavioral diagnosis was highly correlated negatively. Also, the number of graduate courses taken was negatively correlated with the Realistic scale, indicating that those who scored high on this scale had fewer graduate courses than the other psychologists.

VPI Intellectual (Table 2)

There is a high positive correlation between the Intellectual scale and the Realistic, Conventional, and Acquiescence scales of the VPI, although there is a significant negative correlation with the Status scale. This scale is observed to correlate positively with the PPQ Common Sense measure and negatively with the measure of behavioral diagnosis. With regard to the behavioral rating measures, it may be seen that the determination of target behaviors and the establishment of rapport were highly correlated in a positive direction, while determination of antecedent conditions, behavioral change, assessment and behavioral responses were all negatively correlated.

The above correlations seem to indicate a close relationship between the Intellectual scale and a self-concept orientation. There is also some indication that someone scoring high on this scale may not have behavioral inclinations.

VPI Social (Table 3)

The Social scale correlated positively with the VPI scales Conventional and Enterprising. Positive correlations were found with regard to the number of graduate courses taken and the amount of school experience, either as a teacher or as a counselor. There was, however, a negative relationship between this scale and the graduate grade point average and the number of graduate courses taken in school psychology. Both PPQ clinical diagnosis and self-concept diagnosis scales were positively correlated with this scale, while behavioral diagnostic techniques were negatively correlated. Interest in the community showed up as positively related to this scale. In the behavioral ratings, positive correlations were observed with non-specific data and strategies and a negative correlation was observed in regard to the definition of behavior.

VPI Conventional (Table 4)

The Conventional scale correlated positively with the Realistic, Intellectual, Social, Enterprising, and Acquiescence scales of the VPI and correlated negatively with the Status scale. High scores on this scale apparently relate to a stated interest in behavioral treatment and a behavioral orientation, although behavioral diagnosis was negatively correlated. From the behavioral ratings, there is an indication that this scale is related to techniques of determining a target behavior, interpreting within a behavioral framework, and summarizing.

There seems, therefore, to be some indication of a relationship between high scores on the Conventional scale and a preference for certain of the techniques of the behavioral orientation. This is so, even though there is a high correlation between this scale and other scales which seem more closely allied with a clinical or self-concept orientation.

VPI Enterprising (Table 5)

There was a high positive correlation between the Enterprising scale and the Social, Conventional, Artistic and Acquiescence scales, the highest being the Conventional scale. The highest correlation of the Enterprising scale with the concept check list was on the clinical orientation, with self-concept also being positively correlated. The behavioral ratings showed that the "Enterprising" person did not prefer a behavioral assessment phase, nor did he wish to deal in non-behavioral change or clinical dynamic strategy-making. The preference appeared to be for non-specific types of data collection and strategy-making. Perhaps the person who obtains a high score on this scale would be most typically of either a clinical or self-concept orientation.

VPI Artistic (Table 6)

There were very few significant correlational relationships between the Artistic scale and other dimensions, although all relationships which were significant were in the positive direction. There was a correlation between the Artistic scale and the Enterprising, Status and Acquiescence scales of the VPI. There was also a significant relationships between this scale and the behavioral rating of strategy of non-behavioral change.

VPI Self-Control (Table 7)

As might be expected, there was a high positive correlation between the Self-Control scale and age. Infrequency also showed a very high positive correlation, although Masculinity showed a negative correlation. High scores on this scale were negatively related to a behavioral orientation as measured on the concept check list, as well as a behavioral treatment approach. This was somewhat contradicted by the performance measures, however, in that a preference for behavioral strategies and behavioral responses was seen and non-behavioral data,rapport statements and neutral responses were not favored.

VPI Masculinity (Table 8)

This scale correlates significantly in a positive direction with the Realistic and in the negative direction with the Self-Control scales of the VPI. There is a negative relationship between the Masculinity scale and the total number of graduate courses taken as well as with the age of the subjects. On the PPQ scales, behavioral diagnosis shows a negative relationship with the scale, while there is a positive correlation with the measure of "total common sense." Two other indicators of behavioral practice show a negative correlation with the scale, while "dynamic practice" is positively related. This contradicts the self-report on the concept check list where a behavioral orientation was favored and a self-concept orientation was rejected. On this scale there seems to be no clear-cut indication of a preferred theoretical orientation.

VPI Status (Table 9)

The Status scale correlated negatively with the Realistic, Intellectual, and Conventional scales and positively with the Artistic scale.

There is a positive relationship between this scale and the total number of graduate courses taken as well as the total time spent on the job; however, there seems to be an inverse relationship regarding total number of referrals handled and the individual services rendered. A measure of behavioral practice, the definition of a target behavior, was soundly rejected, as well as non-behavioral change as a strategy. No theoretical orientation appeared to be particulary prevalent for those who scored high on the Status scale.

VPI Infrequency (Table 10)

Age, experience, number of referrals, tests given and reports written all correlate significantly with the Infrequency scale. Infrequency is also closely related to the Self-Control scale of the VPI in a positive direction. Although positive correlations are seen with the behavioral categories of strategy, modeling and role playing, the CL behavioral scale showed a negative correlation. Rapport also showed a negative relationship.

VPI Acquiescence (Table 11)

This scale was highly positively correlated with the following scales of the VPI; Realistic, Intellectual, Conventional, Enterprising, and Artistic. The behavioral orientation showed itself to be quite unpopular with those who scored high on the Acquiescence scale. On the PPQ, there was a negative correlation with behavioral diagnosis and total behavioral orientation, while the behavior ratings showed the strategy of behavioral change and behavioral assessment also to be negatively correlated with the Acquiescence scale. The PPQ clinical orientation was positively correlated with Acquiescence as was the BR assessment summary. Acquiescence may therefore have some relationship to a preference for a clinical orientation.

Tests of Significance of Difference between Theoretical Orientation

Tables 12 through 15 show the results of the "t" test run between the various theoretical orientations and also for sex differences.

Male vs. Female (Table 12)

With regard to the scales of the Holland Vocational Preference Inventory, the males appeared to be significantly more realistic and conventional than the females. This would be congruent with Holland's view that the realistic score is more of a masculine oriented measure (Holland, 1965). It measures concrete skills, realism, structure and motor skills. The Conventional scale indicates a person who desires passive and often structured activity, such as collecting, economics, arithmetic, spelling and typing. As would be expected, males also scored at a highly significant level on the Masculinity scale.

Females scored significantly higher on the Self-Control and Infrequency scales of the VPI. This indicates a habitual inhibition of impulses to act out motivation, thinking or fantasy. Also, there is a tendency to have a typical vocational preference and in a broad sense the high scores on the Infrequency scale may indicate a tendency toward incompetency and self-deprecating attitudes toward themselves and deviant attitudes toward their culture.

TABLE 12

RESULTS OF "t" TEST RUN FOR
MALE VS. FEMALE ENROLLEES

VARIABLE	MALE		FEMALE			
	MEAN	S. D.	MEAN	S. D.	t	P
VPI Realistic Score	3.1000	2.6931	0.9000	1.7288	2.72	.01
VPI Intellectual Score	6.0000	3.8662	4.0000	3.2318	1.49	
VPI Social Score	9.5500	3.3321	9.5000	1.5311	.06	
VPI Conventional Score	1.7500	2.7697	0.6000	0.5164	1.80	.05
VPI Enterprising Score	4.9500	3.0171	3.5000	3.4721	1.12	
VPI Artistic Score	6.0500	4.2732	7.6000	4.5509	.90	
VPI Self-Control Score	10.0000	3.8525	12.3000	1.7029	2.25	.05
VPI Masculinity Score	6.7000	2.0800	3.8000	1.7512	4.03	.01
VPI Status Score	9.4000	2.3261	9.9000	1.6633	.68	
VPI Infrequency Score	4.0500	2.2821	6.9000	1.9692	3.52	.01
VPI Acquiescence Score	11.9500	3.6917	9.4000	4.1687	1.63	
	(N = 20)		(N = 10)			

TABLE 13

RESULTS OF "t" TEST RUN FOR ENROLLEES WITH CLINICAL VS. SELF-CONCEPT ORIENTATIONS

VARIABLE	CLINICAL ORIENTATION		SELF-CONCEPT			
	MEAN	S. D.	MEAN	S. D.	t	P
VPI Realistic Score	2.3333	2.5495	1.9286	2.5560	.37	
VPI Intellectual Score	5.4444	3.6094	4.8571	3.8402	.37	
VPI Social Score	10.6667	1.4142	8.2143	3.3553	2.44	.05
VPI Conventional Score	2.0000	3.5000	0.4286	0.5136	1.34	
VPI Enterprising Score	5.0000	2.7839	4.0000	3.1623	.79	
VPI Artistic Score	8.7778	3.3458	5.7143	4.2864	1.91	.05
VPI Self-Control Score	12.3333	2.1213	11.5714	2.0273	.85	
VPI Masculinity Score	4.1111	1.6159	6.2143	2.3916	2.50	.05
VPI Status Score	9.5556	2.6034	9.4286	2.2089	.12	
VPI Infrequency Score	5.5556	2.9627	5.2857	1.6838	.25	
VPI Acquiescence Score	11.7778	3.8658	10.0714	3.4522	1.08	
	(N = 9)		(N = 14)			

TABLE 14

RESULTS OF "t" TEST RUN FOR ENROLLEES WITH CLINICAL VS. BEHAVIORAL ORIENTATIONS

VARIABLE	CLINICAL		BEHAVIORAL			
	MEAN	S. D.	MEAN	S. D.	t	P
VPI Realistic Score	2.3333	2.5495	3.2857	2.9277	.69	
VPI Intellectual Score	5.4444	3.6094	6.1429	4.0999	.73	
VPI Social Score	10.6667	1.4142	10.7143	2.0587	.05	
VPI Conventional Score	2.0000	3.5000	2.4286	2.2991	.30	
VPI Enterprising Score	5.0000	2.7839	4.7143	4.0296	.16	
VPI Artistic Score	8.7778	3.3458	5.4286	5.1270	1.50	
VPI Self-Control Score	12.3333	2.1213	7.1429	4.6701	2.73	.01
VPI Masculinity Score	4.1111	1.6159	6.8571	2.4103	2.59	.05
VPI Status Score	9.5556	2.6034	9.8571	1.3452	.30	
VPI Infrequency Score	5.5556	2.9627	3.7143	3.3022	1.16	
VPI Acquiescence Score	11.7778	3.8658	12.2857	5.0897	.22	
	(N = 9)		(N = 7)			

TABLE 15

RESULTS OF "t" TEST RUN FOR ENROLLEES WITH CLINICAL VS. SELF-CONCEPT ORIENTATIONS

VARIABLE	BEHAVIORAL		SELF-CONCEPT			
	MEAN	S. D.	MEAN	S. D.	t	P
VPI Realistic Score	3.2857	2.9277	1.9286	2.5560	1.05	
VPI Intellectual Score	6.1429	4.0999	4.8571	3.8402	.69	
VPI Social Score	10.7143	2.0587	8.2143	3.3553	2.10	.05
VPI Conventional Score	2.4286	2.2991	0.4286	0.5136	2.27	.05
VPI Enterprising Score	4.7143	4.0296	4.0000	3.1623	.41	
VPI Artistic Score	5.4286	5.1270	5.7143	4.2864	.12	
VPI Self-Control Score	7.1429	4.6701	11.5714	2.0273	2.39	.05
VPI Masculinity Score	6.8571	2.4103	6.2143	2.3916	.59	
VPI Status Score	9.8571	1.3452	9.4286	2.2089	.55	
VPI Infrequency Score	3.7143	3.3022	5.2857	1.6838	1.19	
VPI Acquiescence Score	12.2857	5.0897	10.0714	3.4522	1.04	
	(N = 7)		(N = 14)			

Clinical vs. Self-Concept Orientations (Table 13)

On the scales of the VPI, the clinical enrollees were significantly higher on the Social and Artistic scales. Holland indicates that this type of person is typified by his social skills and his need for social interaction, his characteristics including sociability, nurturance, social presence, capacity for status, dominance, and psychological-mindedness. The "Artistic" person is characterized further by his complexity of outlook, independence of judgment, introversion, originality and reliance on subjective impressions and fantasies for interpretations of and solutions to environmental problems (Holland, 1966).

The only scale which was highly differentiated in favor of the self-concept oriented enrollees was the Masculinity scale. This indicates the presence of personal traits usually associated with masculinity.

Clinical vs. Behavioral Orientations (Table 14)

Two scales of the VPI showed significant differences between enrollees with a clinical and a behavioral orientation. The clinicians were significantly higher in self-control and lower in masculinity. These results are congruent with the differences which were observed earlier. Those with a clinical orientation were also relatively lower when compared with those individuals having a self-concept orientation with regard to the Masculinity scale. The females were significantly higher on the Self-Control scale, just as the "clinicians." This would seem to indicate a feminine orientation is associated with a clinical orientation.

Behavioral vs. Self-Concept Orientations (Table 15)

Statistical difference was found between the enrollees with behavioral and with self-concept orientations regarding the Social, Conventional, and Self-Control scales of the Holland Vocational Preference Inventory.

Just as in the comparison with those individuals having a clinical orientation, the behaviorists were found to be comparatively low scoring on the Self-Control scale. This may tend to indicate a tendency to "act out," which is suggestive of a less controlled approach to life and a willingness to take chances. This follows if one considers the relative newness of the behavioral approach as applied to the school setting. The enrollees having a behavioral orientation were also significantly higher on the Social and Conventional scores of the VPI.

The behaviorist, by scoring high on the Conventional scale, appears to cope with his physical and social environment by selecting goals, tasks, and values that are sanctioned by society. Some of the adjectives which might apply to him are: conforming, orderly, dependent, inflexible, persistent, and practical (Holland, 1965). This high score would seem logical in light of the behaviorist's quest for empirical evidence and interest in the measurement of specific criteria.

Coding for School Psychology

As Holland (1966) stated, classification schemes for use with the Vocational Preference Inventory are based on the assumption that vocational choice is an expression of personality. Therefore, if people are classified together by similar vocational choices, they are also being classified by personality type. To develop a system of classification, Holland used the scale with the highest mean score as a major class and the second and third highest mean scores as sub-classes.

From observation of Figure 1 and Figure 2, the most popular first choice for males and females and all of the theoretical orientations seems to be the Social scale. The second and third choices are also similar across sex and theoretical orientation differences, the second being artistic and the third intellectual by a small margin. From this consistency, it would seem that a coding for school psychology using Holland's system would be most appropriate as "362", which are the scale numbers in order of preference.

Holland (1966) has given the same code to "experimental psychologist," although a "36" seems to apply to such vocations as: psychiatric case worker, social science teacher, rehabilitation worker, speech therapist, social worker, high school teacher, clinical psychologist, foreign missionary, elementary school teacher, psychiatrist and college professor. This in point of fact is a confirmation of Holland's theory.

Conclusions

From the correlational relationships, we see that a clinical orientation seems to be closely related to high scores on the Realistic and Acquiescence scales, while those with a self-concept orientation would probably score high on the Intellectual scale. The behaviorists appear to be related in style to those individuals who score high on the Conventional scale, but not the Enterprising or Self-Control scales.

From the "t"-tests it appears that there are a number of sex differences which are significant relative to the outcomes of the Holland Vocational Preference Inventory. For instance, females scored high on the Infrequency scale. This is quite understandable, since the VPI was designed as primarily a measure of male vocational preferences. It seemed to be confirmed that the Realistic scale tends to be a more masculine oriented scale, while the females appeared to be more self-controlled.

FIGURE 1

MEAN SCORES ON THE HOLLAND VOCATIONAL PREFERENCE INVENTORY FOR MALE AND FEMALE ENROLLEES

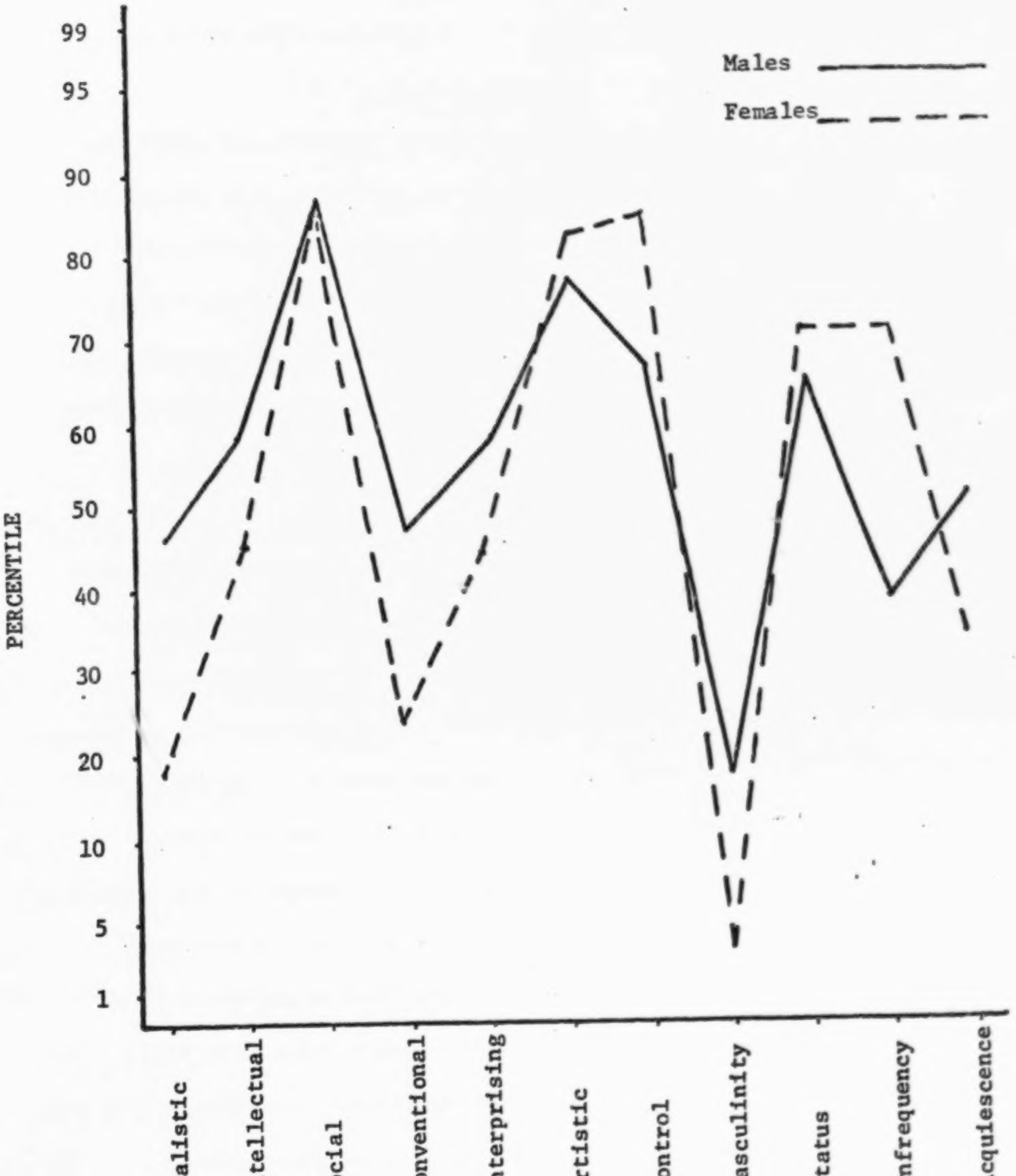
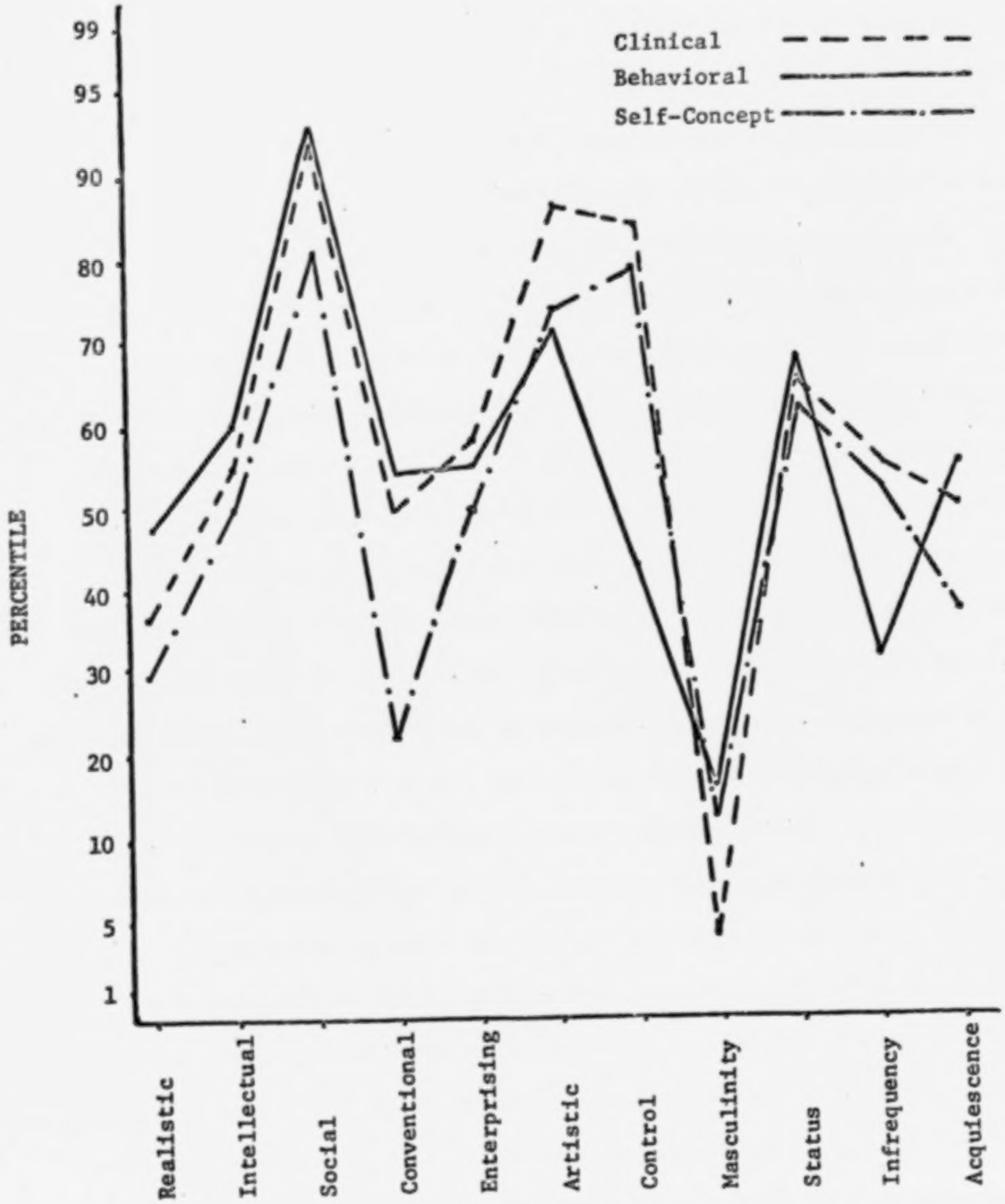


FIGURE 2

MEAN SCORES ON THE HOLLAND VOCATIONAL PREFERENCE INVENTORY FOR ENROLLEES WITH VARIOUS THEORETICAL ORIENTATIONS



With regard to the differences between theoretical orientations, those with a clinical orientation appeared to be more feminine and artistic in their preferences. The behaviorally oriented psychologist, on the other hand, was seemingly more conforming, orderly, and practical. The self-concept oriented individuals scored lower on most of the scales than those having the other two orientations. The result was that the orientation was relatively undifferentiated from the others.

One observes, therefore, that the experimental data reported in this study tend to confirm the empirical observations which are often made about "types" of psychologists. For example, the picture of a behaviorally oriented psychologist which emerges is one of a person who is concerned with the values which are imposed by society. He desires to be orderly and precise in his methods. In choosing methods, they must be as practical as possible and only those which can be verified empirically will be used. At the other extreme, the clinically oriented psychologist tends to be more artistic and has less masculine preferences. He is concerned about social interaction and prefers to deal with situations in a more "personal" or "internal" manner and is less concerned with practicality. The self-concept oriented psychologist appears to be somewhere between these two extremes, having few characteristics which differentiate him in large measure from the other orientations.

Since differences between various theoretical orientations did show up quite clearly not only in terms of self-report measures, but also in the measures of actual performance, there may be a distinct relationship between choices of theoretical orientation and actual behaviors of school psychologists. By examining in detail the characteristics of school psychologists, it may be possible to formulate in more concise terms the attributes valuable to individuals who are successful in school psychology. In this way a probability statement might be made regarding the success of an individual about to enter graduate studies in school psychology. By such measures as the Holland Vocational Preference Inventory, the chances of placing the most appropriate individuals in graduate programs of school psychology are greatly enhanced.

CHAPTER VI

RESEARCH OUTCOMES OF THE INSTITUTE

This chapter reports the results of the statistical analysis of data in the institute. Three important questions were posed initially in the design of this study:

1. Is it possible in a short-term institute to effect change not only in cognitive awareness, but in measurable dimensions of behavior as manifested in school psychology practice?
2. What is the effect of an immediate feed-back system such as television in the changing of cognitive concepts as well as behavioral practice?
3. What is the holding power of such intensive training techniques in terms of school psychological practice after the institute has completed its work?

Answers to these questions are the most important features of this entire study. But these answers are related to the measurement of change both in individuals and groups. Measurement of change, particularly as it relates to training programs is no simple matter. One can utilize subjective and objective measures of change. One can measure change by dimensions on paper and pencil type instruments, one can conduct surveys of opinions and attitudes towards the experience, but the real test of change must relate to behavioral dimensions. Obviously, the writer and the other staff were interested in changes in cognitive attitudes as well as a favorable evaluation from the enrollees, but the main intent was to demonstrate some change in psychologists' behavior.

The overall goal of the institute was to train school psychologists to be more effective communicators. It was considered that the behavioral model of school psychology practice was the optimum approach to effective and relevant communication. This related not only to the optimum use of time in testing, interviewing teachers, and consultation with school staff, but the development of a repertory of strategies and assessment techniques which would help the school psychologist to be more effective. As a result, when this major criterion variable was more specifically detailed, changes in theoretical orientation, cognitive understanding, interviewing style, allocation of time commitments, and psychological reports all became sub-criterion variables which could, theoretically at least, measure the total change, if any, which was expected and anticipated.

Method

Chapter 3 has detailed at some length the specific procedures which took place in the approach to this study. But for review purposes the writer will briefly summarize some of the major design features. From 112 completed applications by individuals who met the criteria of 1) completion of minimum graduate training in school psychology (i. e. as evidenced by a master's degree and/or state certification or credentialing as a school psychologist) and 2) de facto performance of school psychological services in a public or private school setting, a random assignment based on a geographical stratification of the total number of applicants was made to four classifications: A) participant status, B) control status, C) alternate status, and D) other status. Thirty school psychologists from throughout the nation were invited to attend the institute during 8 weeks of the summer of 1967.

The overall design of the institute included the collection of a number of paper-pencil test variables and demographic-educational information on all applicants, certain selective testing and behavioral analysis on participants and certain controls during the course of the institute and thereafter, and finally the repeat of certain measures after the institute together with the obtaining of an audio tape recording of a psychologist-teacher interview in the field. In addition a sample psychological report was obtained from enrollees both prior to and after the institute had been completed.

In terms of the specific design three groups were utilized. The participants who received pre-institute testing (along with all other applicants) and on whom two video-tape productions were collected together with post-institute measurements and field testing, control A were individuals throughout the nation who had applied but were randomly assigned to control status, and Control B consisting of a number of the same control group mentioned above in Control A, but who were residing in the vicinity of the Bay area. These latter individuals specified as Control B were invited into the college for two one-day workshops in the fall of 1967 to test out the effect of television experience alone on changes in the dependent variables.

The overall independent variable was the institute itself with the treatment variables relating to the didactic instruction, the special use of television as a teaching technique, and the host of personal and group interactions which occurred from the enrollees working together. Television was not only used as a teaching device, but it was also used as a measurement instrument for obtaining basal rates of psychologist interview behaviors. Two fifteen minute filmings were made on each of the 30 participant psychologists. The first was made on the second day of the institute and the second video-taping was obtained from each of the enrollees during the final week of the institute. In addition, an audio taping was obtained from each of the enrollees and Control A individuals in the field. Control B individuals had two video tapings which took place during the one-day workshops in November and December 1967. The workshops dealt primarily in the techniques of televising the control B group and having them view their own tapes without critiquing from staff. Moreover, no instruction was offered to the Control B group and all references to behavior modification were notably absent. As a result, the attempt was to ascertain the power potential of the television experience itself on any possible change in the behavior or cognitive preferences of Control B individuals.

A number of statistical operations were accomplished on the test and behavioral data obtained in the institute. For the paper-pencil instruments an analysis of covariance for the three groups was accomplished on each of the paper-pencil variables with the covariate being the pre-test scores. For changes in theoretical orientation or expressed preference for approaches a chi square analysis was done. On the behavioral data, three operations were effected. First, an analysis of variance was obtained for the three groups on the behavioral categories based on field-test data only. Second, an analysis of covariance was obtained on the post-test data only with the pre-test as the covariate. Third, an analysis of covariance was obtained on the field test data only with both pre and post-test data as covariates.

The purpose of these three analyses of behavioral data should be explained. First of all, the analysis of variance on the field test data only indicated the absolute magnitude of difference which existed on the field testing data between participants and controls. Second, the analysis of covariance on post-test data with pre-test data as a covariate revealed the amount and direction of change within groups from pre-testing to post-testing. It also provided some information as to the relative strength of the alternate treatments versus no treatment. Third, the analysis of covariance with pre-post testing scores as covariates indicated the holding power of the alternate treatments. If the changes observed from the pre-post observations remained constant in the field testing, then one should expect no significant F ratios. On the other hand if significant F ratios were to be obtained, then either there would have been regression towards earlier scores (either pre or post) or changes in still another direction.

Results

Table 1 reports the ANCOVA results for enrollees and control groups on the paper-pencil variables.[1] Figures 4 through 30 demonstrate more graphically the changes which took place on the Time Analysis Form, the Psychological Practices Questionnaire, The Concept Check List, and the Psychological Services Inventory.

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[1] A discussion rightly needed at this point should be one related to the internal consistency of the instruments. Rodger Marion in a thesis under the direction of the writer (An analysis of the Changes in Theoretical Orientations and the Strategy Selection Procedures of School Psychologists after an N. D. E. A. Advanced Counseling Institute, unpublished master's thesis, California State College, Hayward, 1968) did a series of statistical analyses of problems relating to the reliability and consistency of choice patterns with these instruments. He investigated first of all whether the male applicants differed from female applicants in the manner and ranking of their choices on these instruments. Using Kendall's Concordance statistic he found no significant differences in the choice patterns of males and females. Second, he examined the

FOOTNOTE - continued

consistency of choice patterns on the PPQ and PPI related to theoretical triad. In other words he examined the consistency of choice patterns both for enrollees and participants in relationship to theoretical framework. Here he found that self-concept enrollees were most consistent in their approach to diagnosis and treatment alternatives. Third, he examined pre-post changes on the instruments utilizing both "t" tests and Kendall's Concordance technique. Mean ranks for male and female groups, participant and applicant groups agreed very highly in the order of .80 to .90. Since he did not have available to him the behavioral data, his thesis was mostly concerned with establishing the internal consistency and reliability of the paper-pencil instruments with some evaluation of pre-post changes utilizing analyses of variance and "t" testing. Much of what he did was superseded by the more comprehensive analyses of pre-post change which were only available after the field testing and the subsequent analysis of data. Readers interested in the specific reliability studies undertaken with each instrument are referred to his thesis. The judgment here regarding satisfactory internal consistency and reliability is based on his study.

TABLE 1

ANALYSIS OF COVARIANCE OF INSTITUTE TEST VARIABLE FOR EXPERIMENTAL AND CONTROL GROUPS

ariable	Pre Test Means (Covariate)	Post Test Means (Variate)	DF	F
IME ANALYSIS FORM				
. No. referrals received				
Enrollees	21.13	24.03	43	4.30*
Control A	17.40	33.30		
Control B	15.75	22.50		
2. No cases tested				
Enrollees	32.23	20.37	43	3.99
Control A	22.20	16.70		
Control B	16.00	13.75		
3. No. reports written				
Enrollees	26.30	14.23	43	3.73
Control A	16.90	12.80		
Control B	13.75	14.00		
4. No. counseling sessions				
Enrollees	18.30	16.47	43	28.24**
Control A	29.50	20.40		
Control B	13.00	15.75		
5. No. conferences				
Enrollees	73.16	62.20	42	1.38
Control A	58.10	64.90		
Control B	77.00	73.25		
6. No. of research activities				
Enrollees	0.93	1.67	43	.66
Control A	0.70	1.90		
Control B	0.75	2.75		
PSYCHOLOGICAL PRACTICES QUESTIONNAIRE				
7. Diagnosis Clinical				
Enrollees	8.47	5.90	39	7.07*
Control A	11.20	8.40		
Control B	6.83	6.33		
8. Diagnosis Self-Concept				
Enrollees	12.47	9.87	39	1.53
Control A	12.60	14.00		
Control B	14.83	13.67		

F at 1 and 40 * .05 = 4.08
** .01 + 7.31

ANALYSIS OF COVARIANCE OF INSTITUTE TEST VARIABLE FOR EXPERIMENTAL AND CONTROL GROUPS

Variable	Pre Test Means (Covariate)	Post Test Means (Variate)	DF	F
9. Diagnosis Behavioral			39	.91
Enrollees	12.90	18.43		
Control A	7.80	10.80		
Control B	11.50	13.33		
10. Treatment Clinical			39	4.93*
Enrollees	7.53	5.50		
Control A	10.00	9.00		
Control B	6.00	9.33		
11. Treatment Self-Concept			39	4.78*
Enrollees	11.16	8.63		
Control A	10.40	11.60		
Control B	13.33	10.66		
12. Treatment Behavioral			40	2.86
Enrollees	12.50	16.90		
Control A	11.20	12.88		
Control B	11.67	13.00		
13. Total Clinical			39	8.15**
Enrollees	15.90	11.40		
Control A	21.20	17.99		
Control B	12.83	15.67		
14. Total Self-Concept			39	3.70
Enrollees	23.63	18.40		
Control A	23.00	25.60		
Control B	28.16	24.33		
15. Total Behavioral			40	2.37
Enrollees	25.67	35.27		
Control A	19.00	23.60		
Control B	23.17	26.33		
16. Total Electic			40	1.01
Enrollees	18.97	18.90		
Control A	20.80	17.40		
Control B	19.33	17.33		
CONCEPT CHECKLIST				
17. Total Clinical			43	33.50**
Enrollees	26.27	17.30		
Control A	28.12	29.12		
Control B	27.33	23.16		

TABLE 1 (Continued)

NALYSIS OF COVARIANCE OF INSTITUTE TEST VARIABLE FOR EXPERIMENTAL AND CONTROL GROUPS

ariable	Pre Test Means (Covariate)	Post Test Means (Variate)	DF	F
18. Total Self-Concept				
Enrollees	23.83	19.40	43	9.28**
Control A	27.87	27.62		
Control B	27.33	23.67		
19. Total Behavioral				
Enrollees	19.57	37.27	43	15.08**
Control A	21.62	24.87		
Control B	17.83	16.50		
SERVICES QUESTIONNAIRE				
20. Services to Individual Real				
Enrollees	27.03	23.63	43	2.90**
Control A	26.00	26.25		
Control B	24.00	22.83		
21. Services to Individual Ideal				
Enrollees	30.20	29.13	39	.64
Control A	30.50	30.63		
Control B	27.17	26.83		
22. Services School as Whole Real				
Enrollees	25.23	23.63	39	6.99*
Control A	26.12	23.37		
Control B	22.00	16.50		
23. Services School as Whole Ideal				
Enrollees	32.43	33.47	43	.009
Control A	36.50	34.62		
Control B	23.50	29.83		
24. Research Real				
Enrollees	7.80	6.23	43	19.19**
Control A	8.25	8.75		
Control B	7.17	4.67		
25. Research Ideal				
Enrollees	13.40	15.37	43	8.70**
Control A	15.12	15.25		
Control B	12.17	11.00		
26. Community Real				
Enrollees	7.93	17.47	43	17.97**
Control A	9.00	8.50		
Control B	6.50	5.50		
27. Community Ideal				
Enrollees	10.17	10.33	43	2.80
Control A	11.00	11.50		
Control B	9.00	9.83		

As can be seen from an inspection of the table enrollees tended to change their time orientation towards certain psychological tasks, to change in their theoretical orientation and to change in certain aspects of school services. Of the 29 analyses of covariance completed, 15 or 55 per cent yielded significant F ratios. Though changes in the Time Analysis Form were somewhat inconclusive, changes in the Psychological Practices Questionnaire, The Concept Check List, and the Psychological Services Inventory showed a more clear trend on the part of the enrollees towards a behavioral model of school psychology.

Table 2 reports changes in theoretical orientation from pre-institute testing to post-institute testing for the enrollees. A chi square analysis by major category of self-concept, clinical, and behavioral orientations reveals significant results on first and second choice theoretical orientations. Figures 1 through 3 show these changes in graphic form.

Table 3 presents the summary results of 34 analyses of variance accomplished on the behavioral ratings for the field data only. Here it is apparent that the enrollees or experimental group were more specific in identifying target behaviors, and antecedent conditions. They were considerably lower in discussions of intervening variables and demographic data. The ratio composites showed these differences in favor of the enrollees most dramatically. Figures 31 through 44 demonstrate graphically the changes on the ratio composite mean scores. Of these 34 analyses of variance, 15 or 44 per cent yielded significant F ratios.

Table 4 is a summary table on the composite ratios of the behavioral ratings. It provides comparison data for three sets of statistical

TABLE 2

Pre and Post Institute Theoretical Orientations for Enrollees and Chi Square Analysis

Category	1st		2nd		3rd	
	Pre	Post	Pre	Post	Pre	Post
SELF-CONCEPT						
1. Non-Religious Existentialism	0	0	0	0	1	0
2. Religious Existentialism	2	1	1	1	2	1
3. Self-Concept Theory	9	2	7	2	4	10
4. Phenomenology, Gestalt Psychology	3	1	5	1	2	3
CLINICAL						
5. Daseinanalysis	0	0	0	0	0	0
6. Neo-Psychoanalytic	6	0	4	2	8	3
7. Psychoanalytic	2	1	2	0	1	0
8. Rational Psychotherapy	1	0	1	1	1	2
BEHAVIORAL						
9. Behavior Therapy	1	9	2	10	2	2
10. Experimental Behaviorism	4	13	3	9	4	1
11. Behavioral Counseling		3	3	3	2	6
12. Experimentalism	2	0	2	1	3	2

Chi Square Analysis Summary

Category	1st		2nd		3rd	
	Pre	Post	Pre	Post	Pre	Post
Self-Concept	14	4	13	4	9	14
Clinical	9	1	7	3	10	5
Behavioral	7	25	10	23	11	11
Chi Square	22.20		11.20		3.05	

df = 2

P .01 = 9/21, .05 = 5.99

Figure 1

INSTITUTE THEORETICAL ORIENTATION CHANGES FOR ENROLLEES

FIRST CHOICE

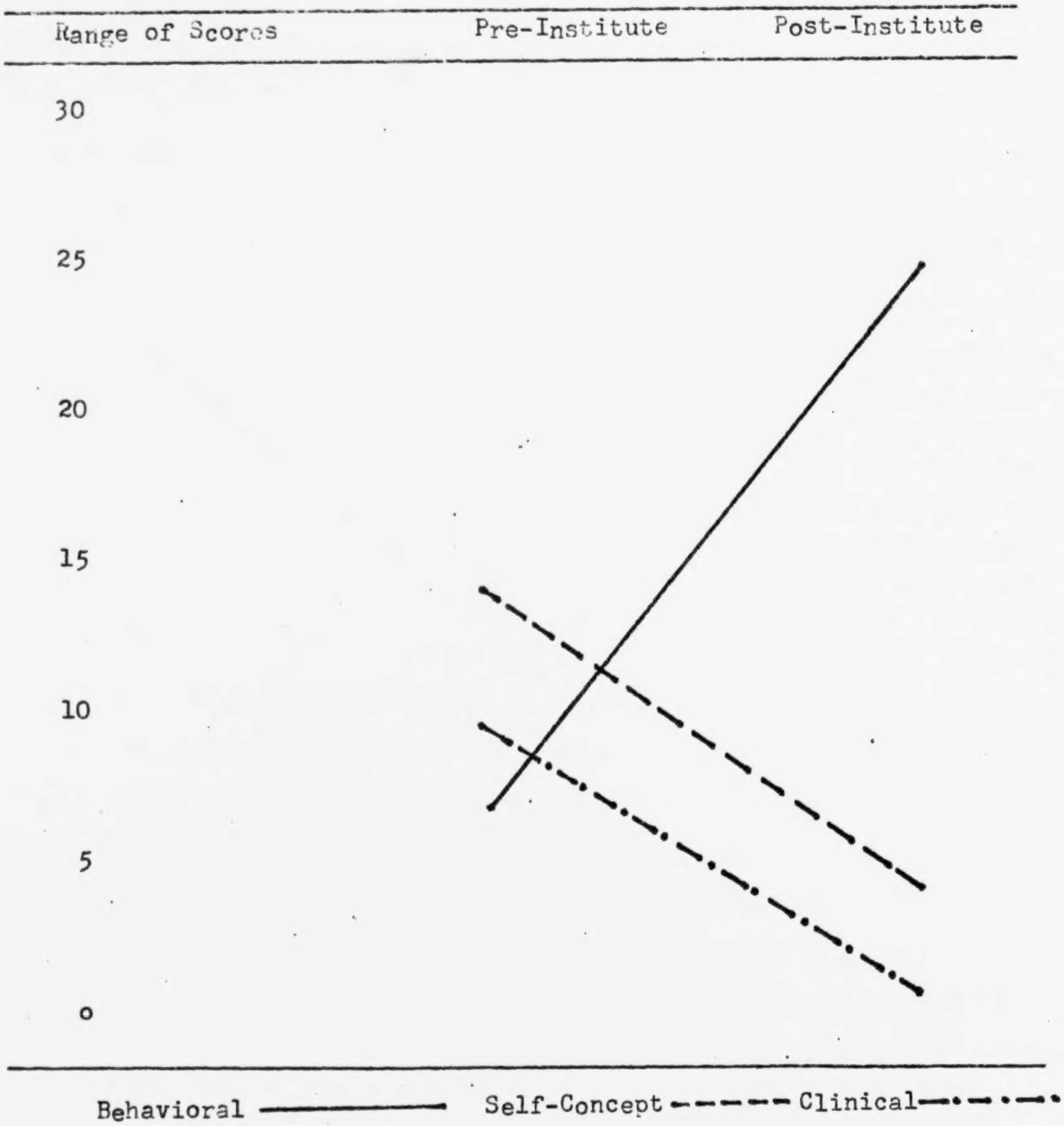

Figure 2

INSTITUTE THEORETICAL ORIENTATION CHANGES FOR ENROLLEES

SECOND CHOICE

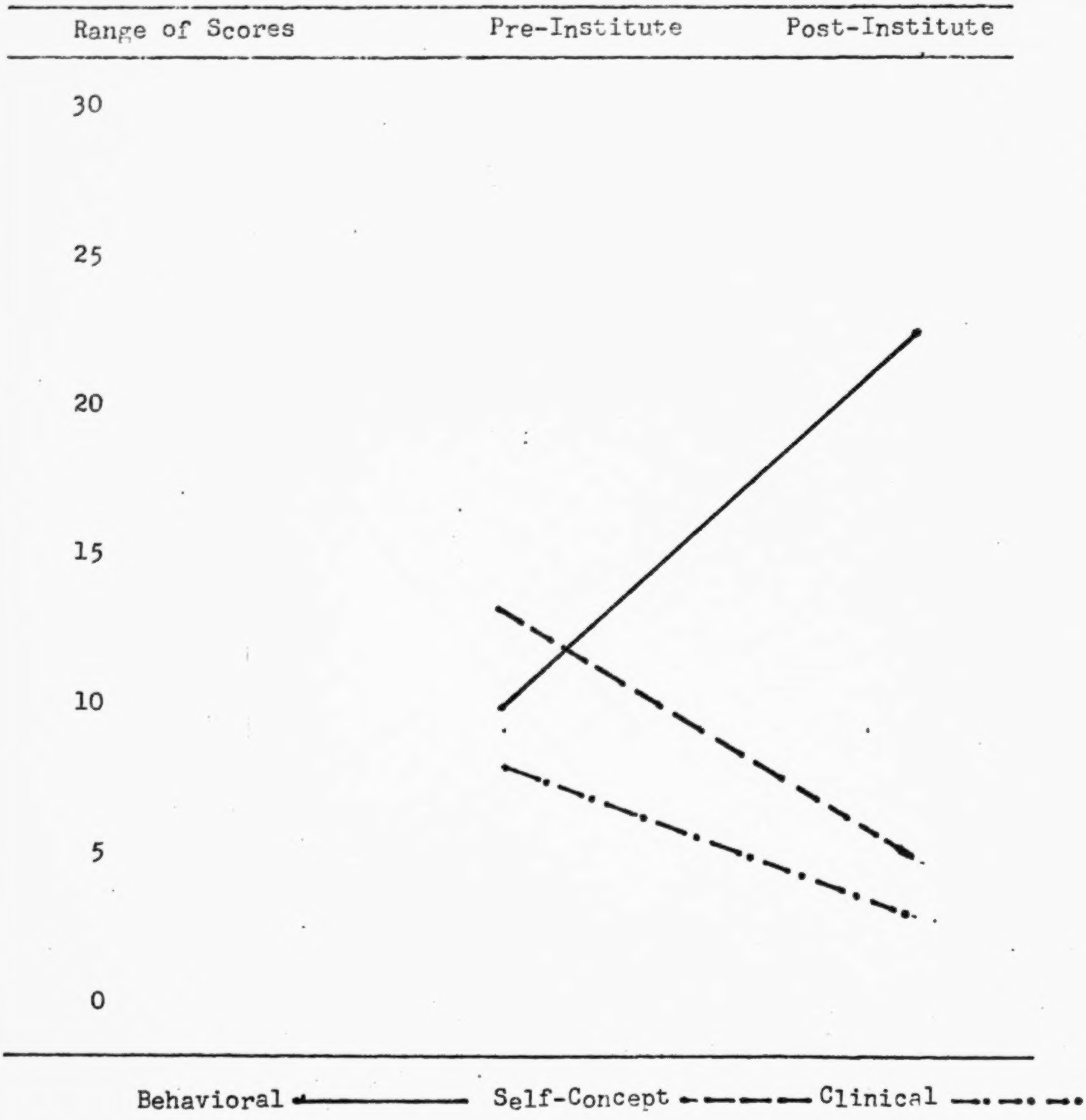

Figure 3

INSTITUTE THEORETICAL ORIENTATION CHANGES FOR ENROLLEES

THIRD CHOICE

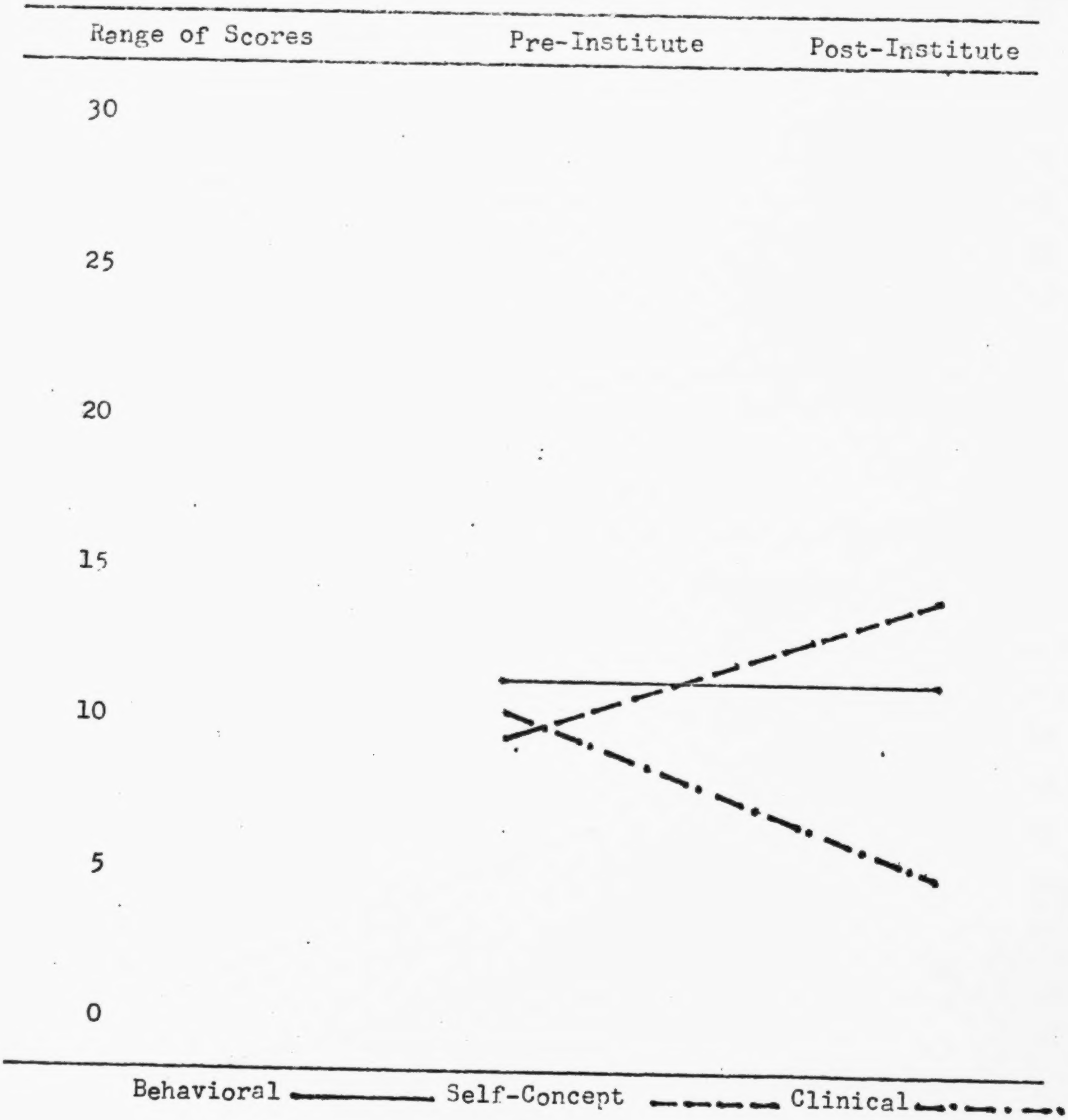

Figure 4

TIME ANALYSIS FORM CHANGES ON NUMBER OF REFERRALS RECEIVED FOR EXPERIMENTAL AND CONTROL GROUPS

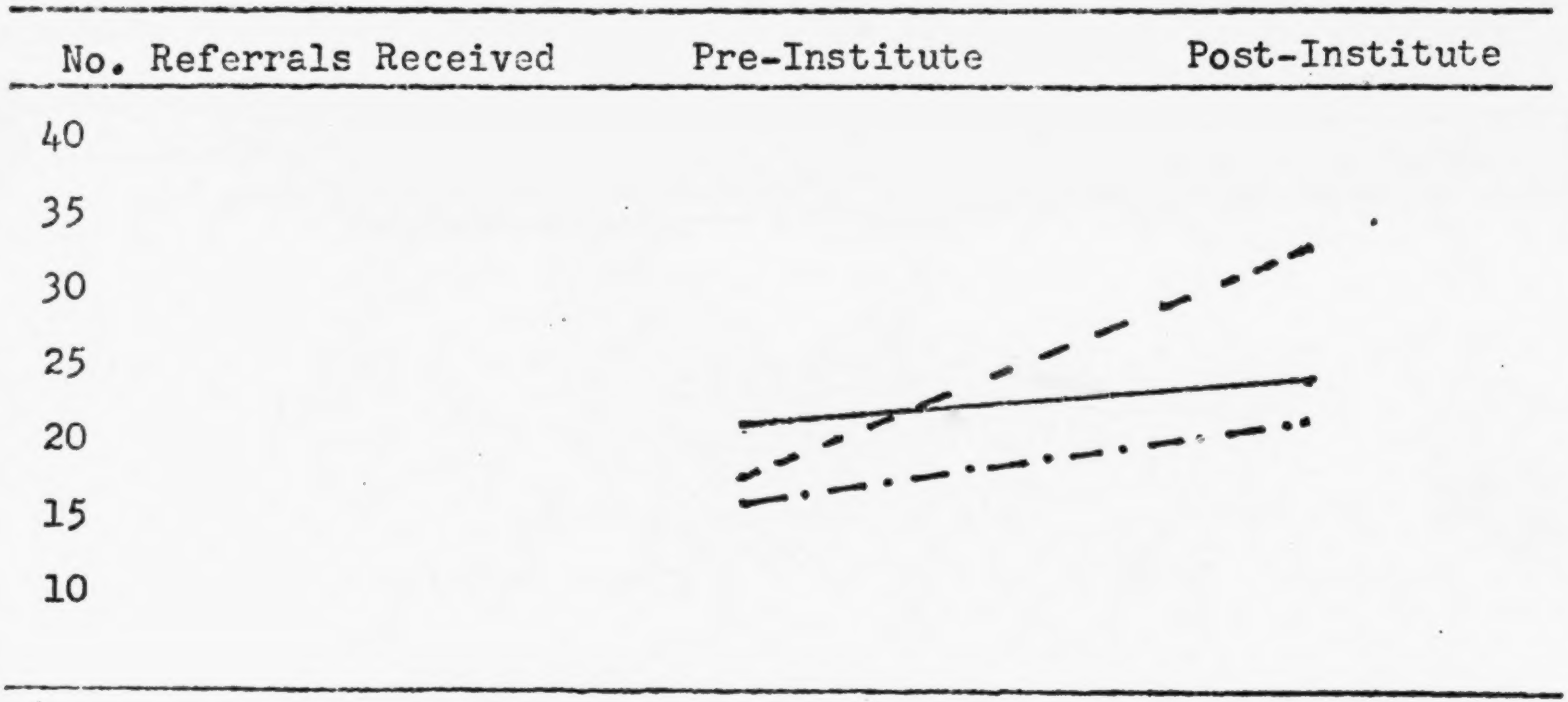

Figure 5

TIME ANALYSIS FORM CHANGES ON NUMBERS OF CASES TESTED FOR EXPERIMENTAL AND CONTROL GROUPS

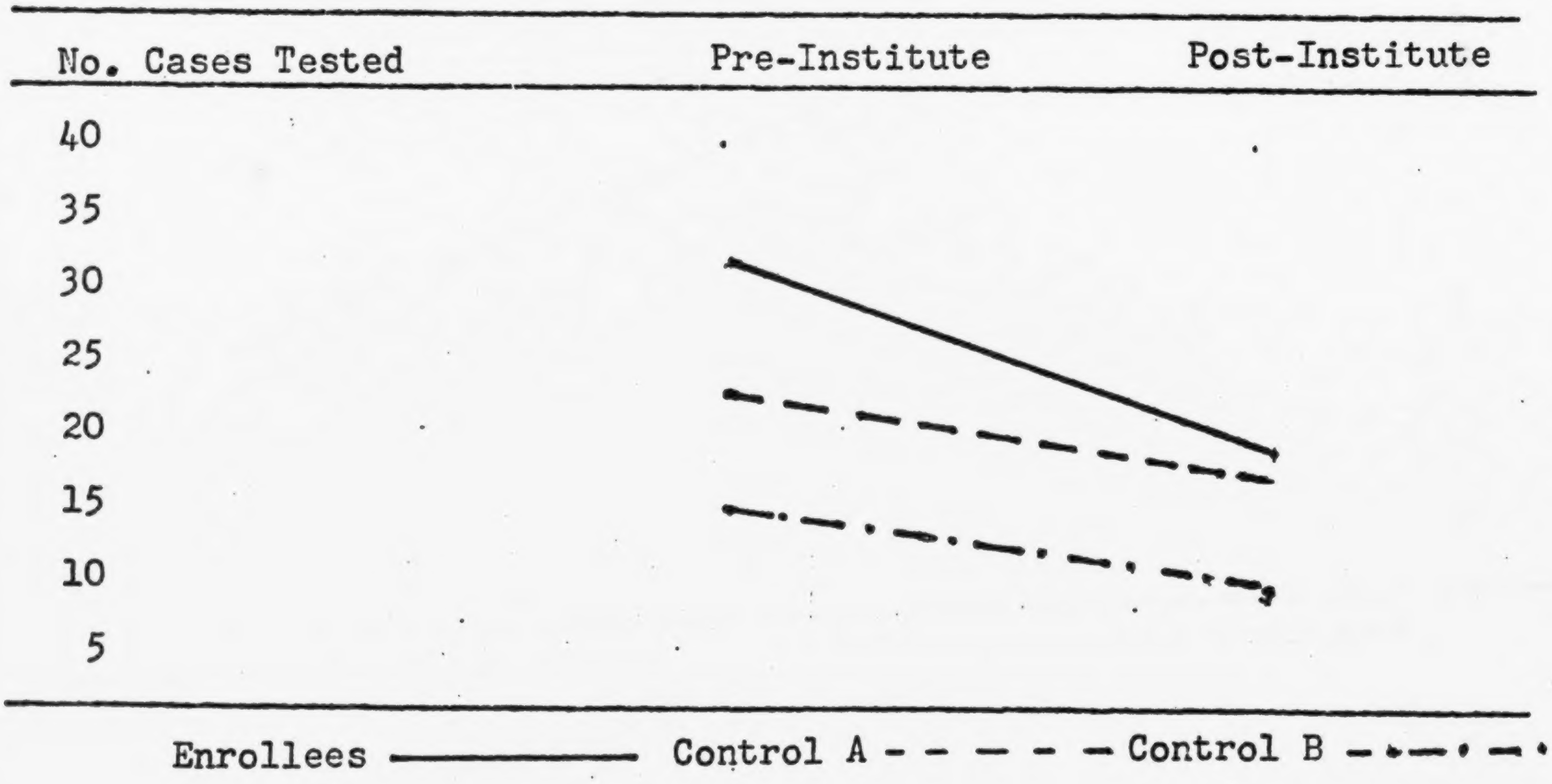

Figure 6

TIME ANALYSIS FORM CHANGE ON NUMBER OF REPORTS
WRITTEN EXPERIMENTAL AND CONTROL GROUPS

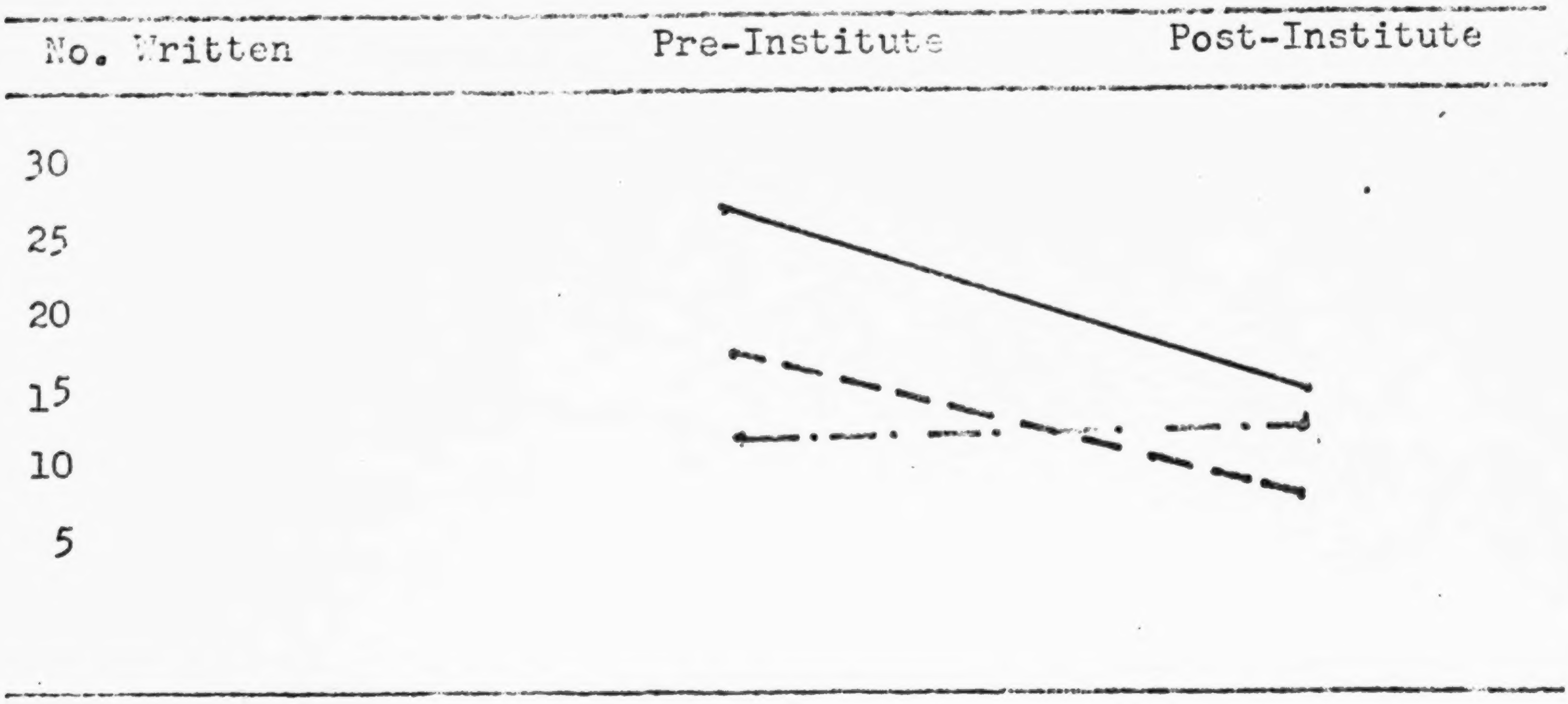

Figure 7

TIME ANALYSIS FORM CHANGE ON NUMBER OF COUNSELING
SESSIONS EXPERIMENTAL AND CONTROL GROUPS

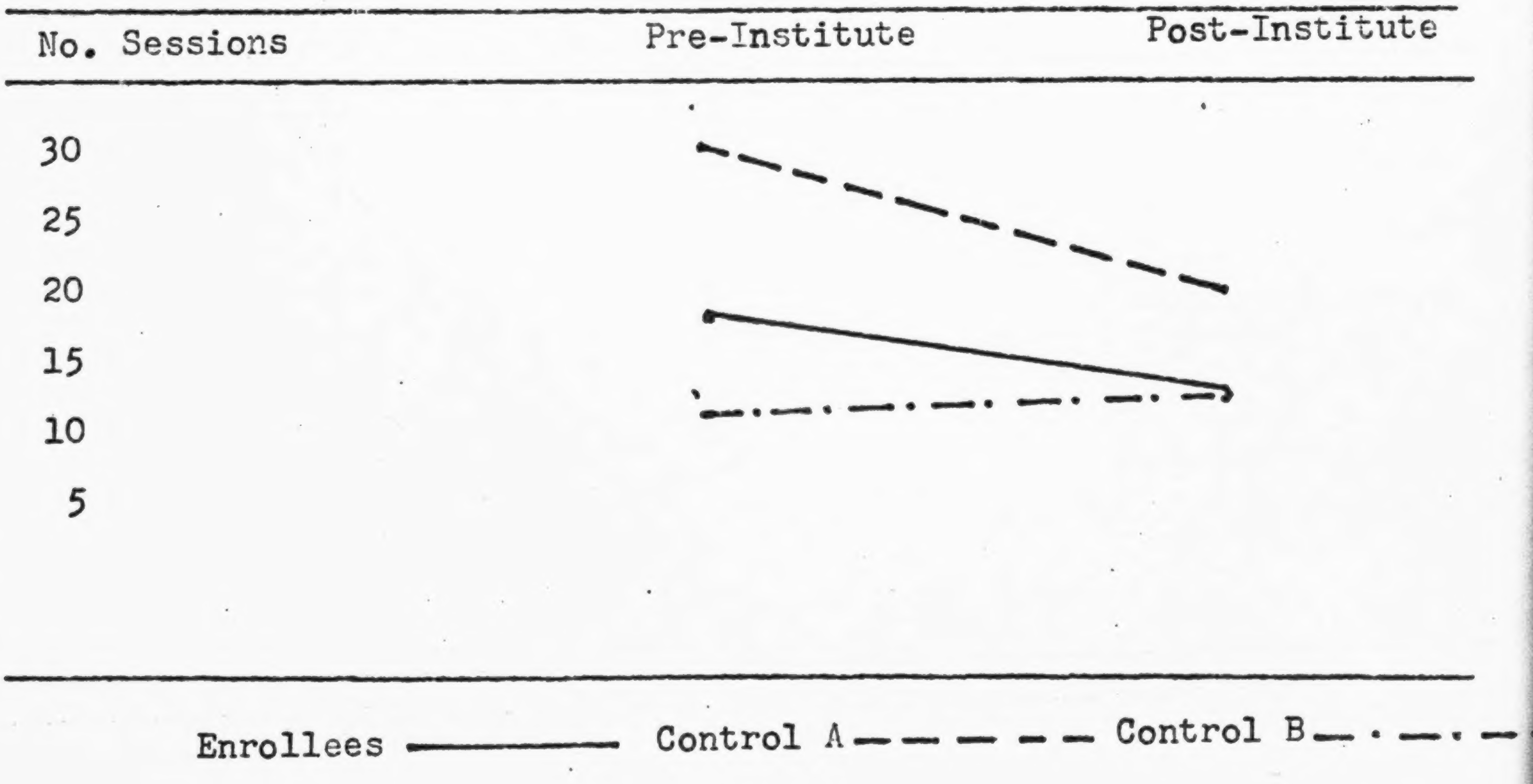

Figure 8

TIME ANALYSIS FORM NUMBER OF CONFERENCES EXPERIMENTAL AND CONTROL GROUPS

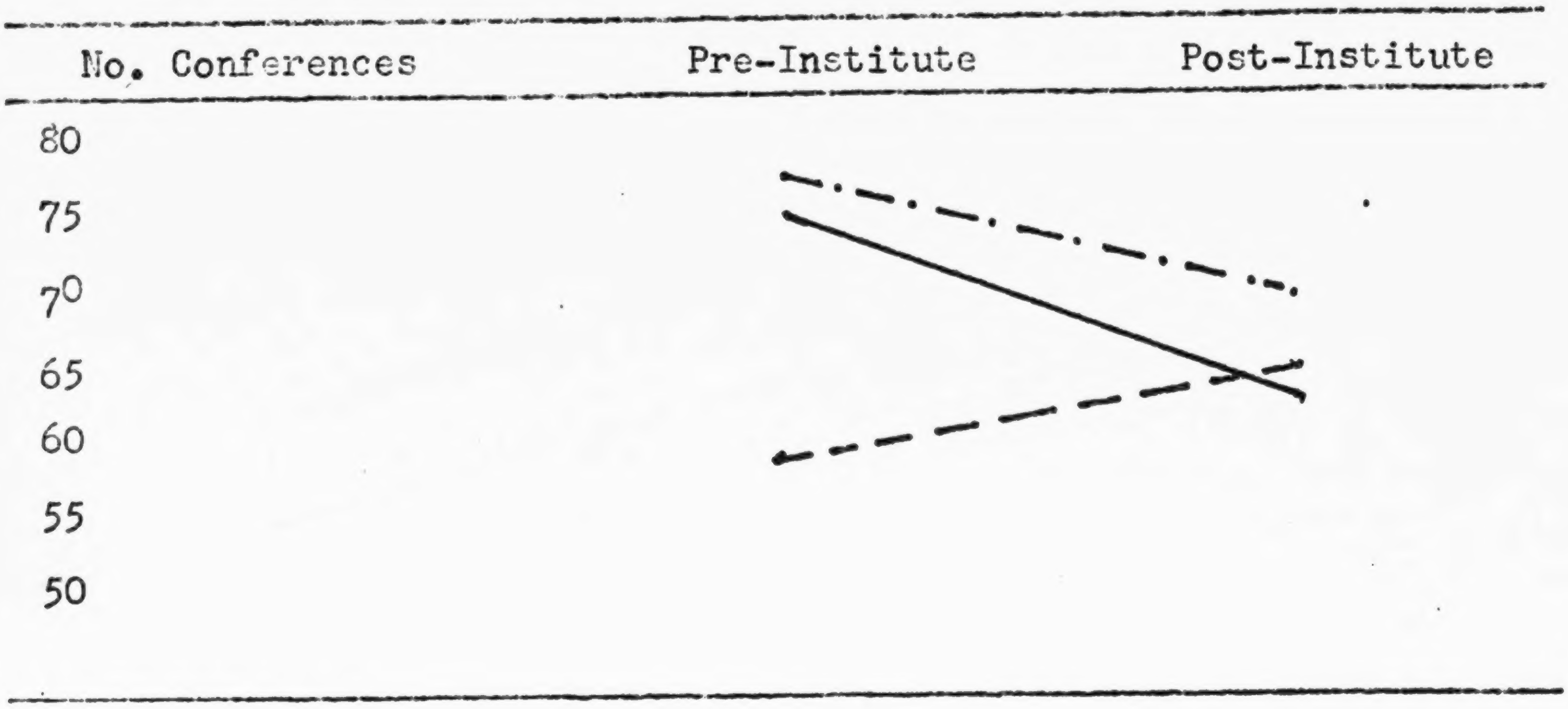

Figure 9

TIME ANALYSIS FORM NUMBER OF RESEARCH ACTIVITIES EXPERIMENTAL AND CONTROL GROUPS

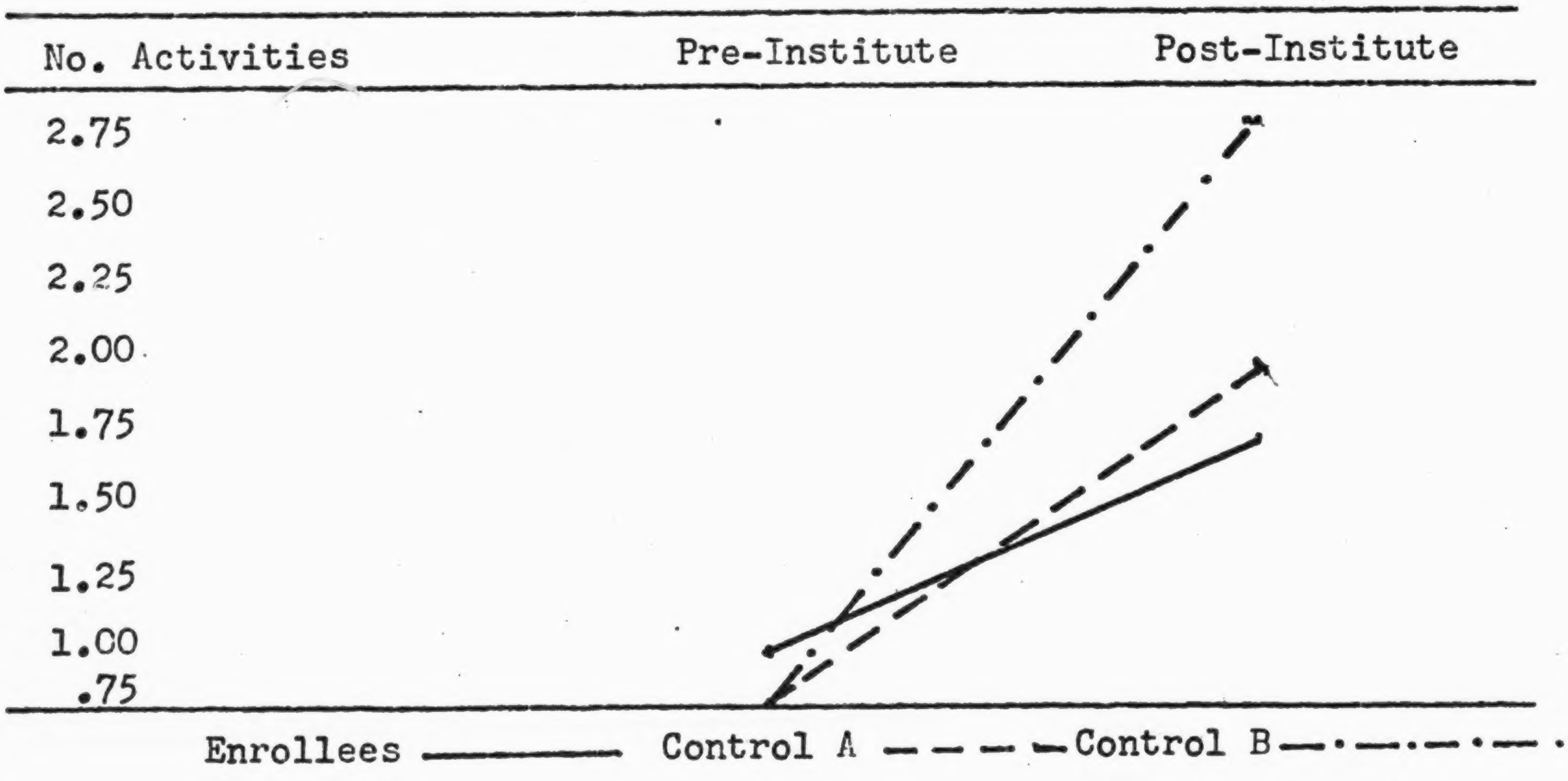

Figure 10

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: DIAGNOSIS CLINICAL CHANGES FOR EXPERIMENTAL AND CONTROL GROUPS

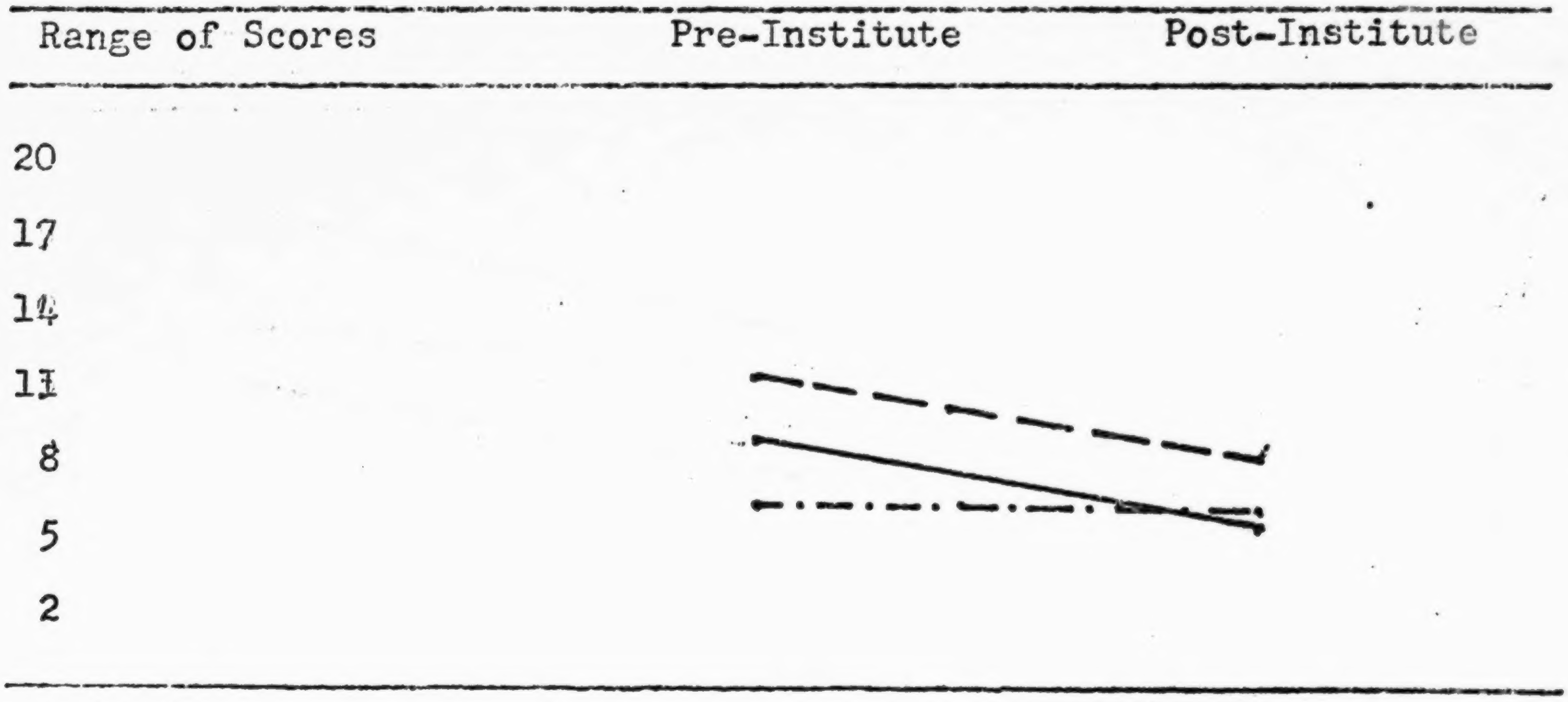

Figure 11

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: DIAGNOSIS SELF-CONCEPT CHANGES FOR EXPERIMENTAL AND CONTROL GROUPS

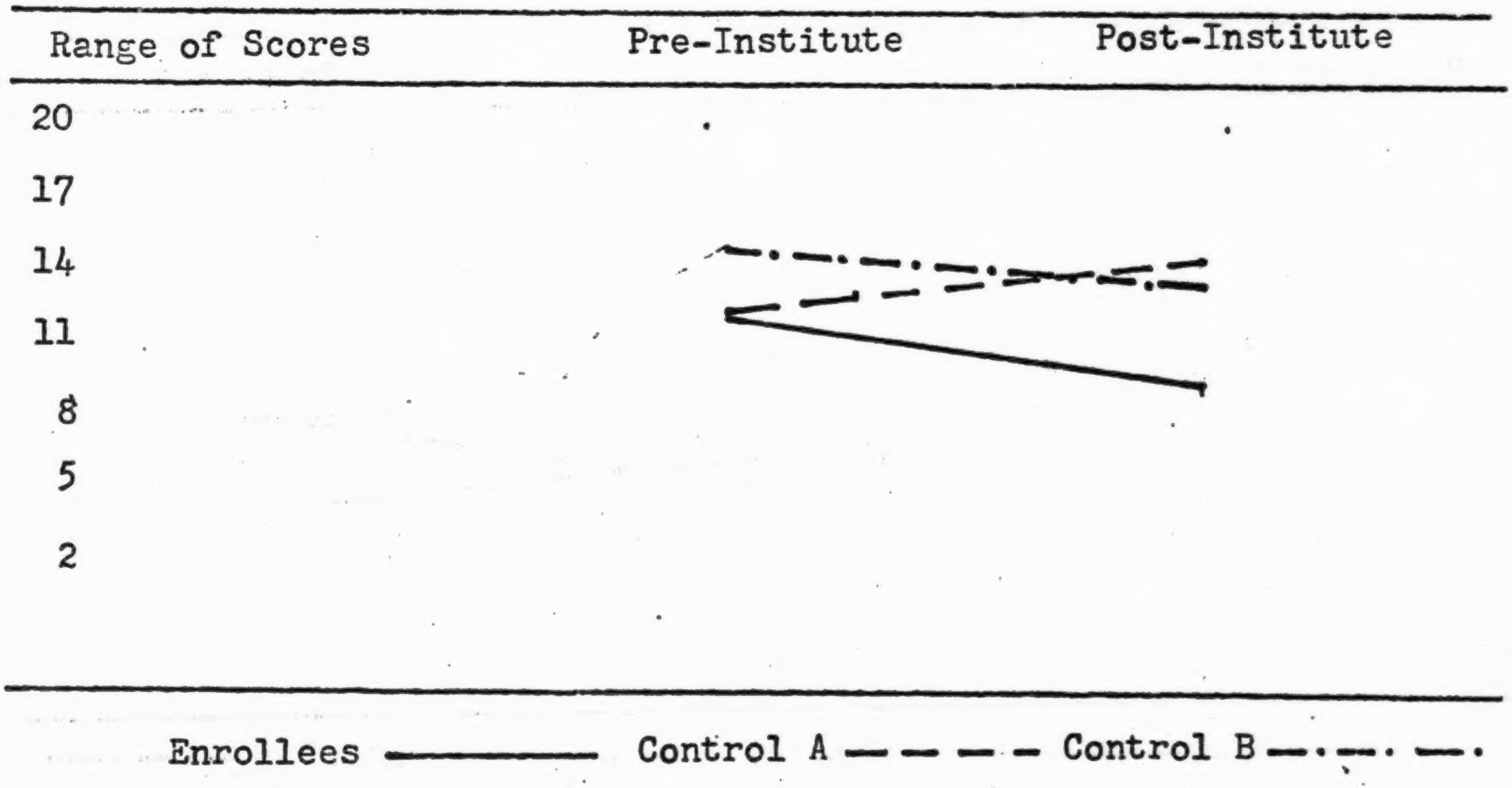

Figure 12

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: DIAGNOSIS BEHAVIORAL CHANGES FOR EXPERIMENTAL AND CONTROL GROUPS

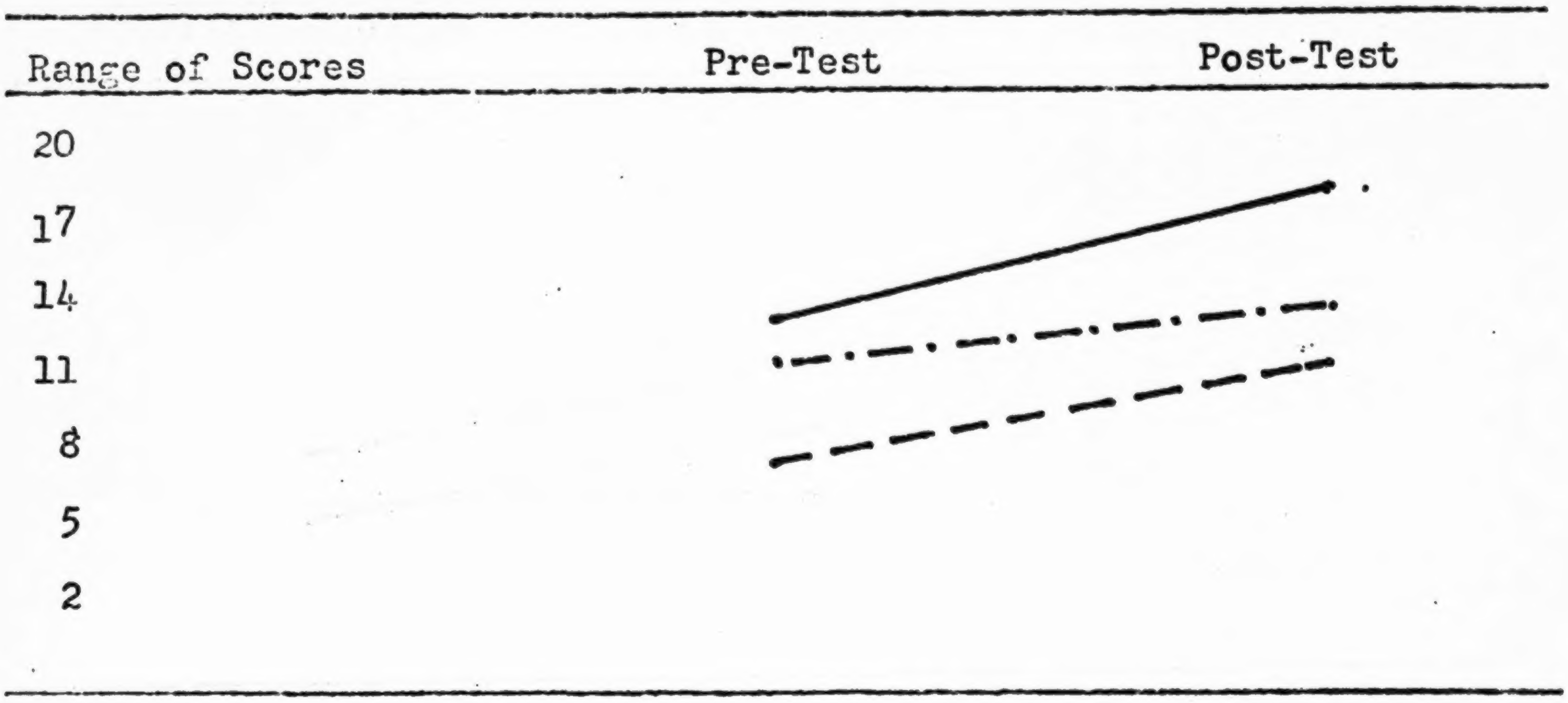

Figure 13

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: TREATMENT CLINICAL CHANGES FOR EXPERIMENTAL AND CONTROL GROUPS

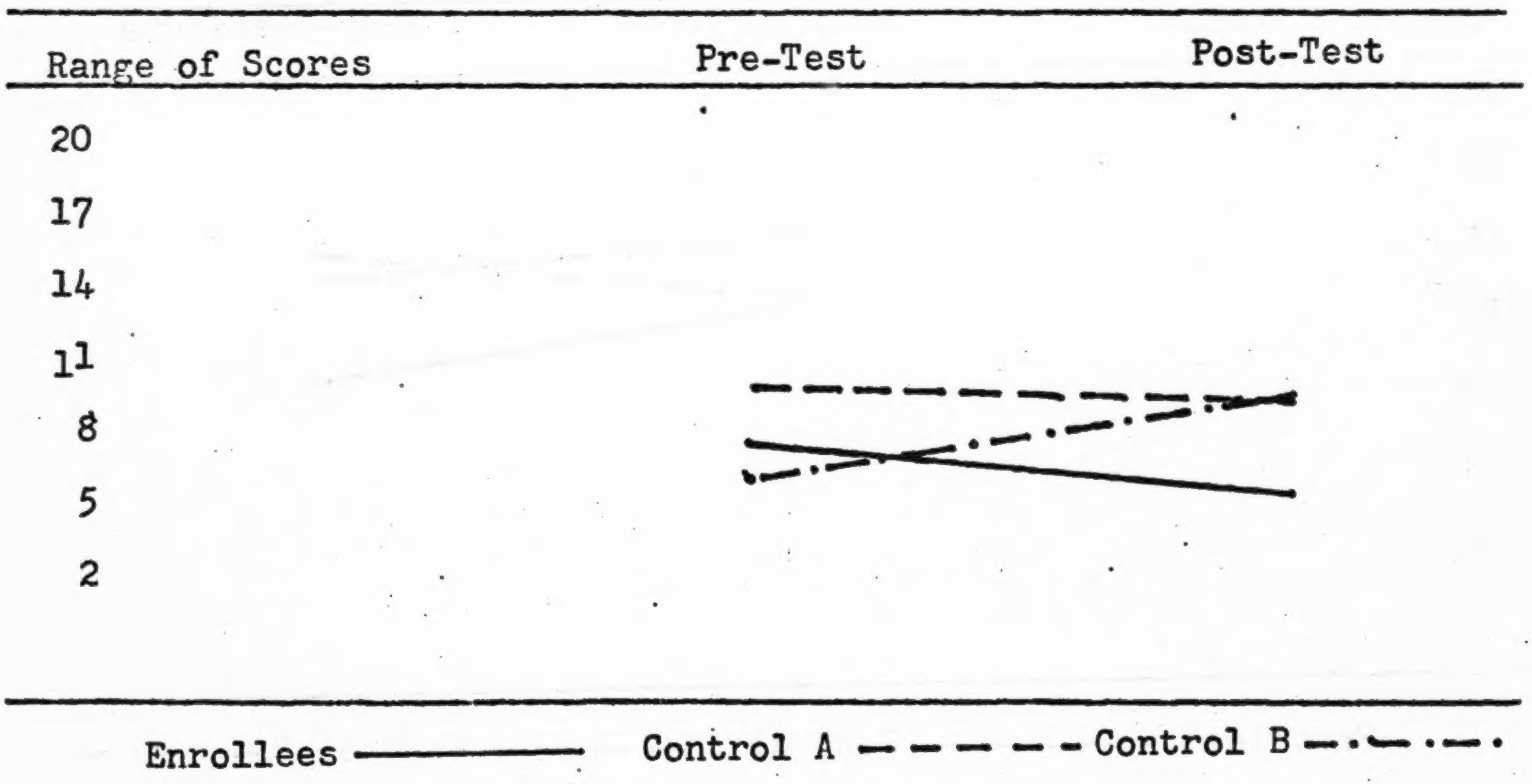

Figure 14

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: TREATMENT SELF-CONCEPT CHANGES FOR EXPERIMENTAL AND CONTROL GROUPS

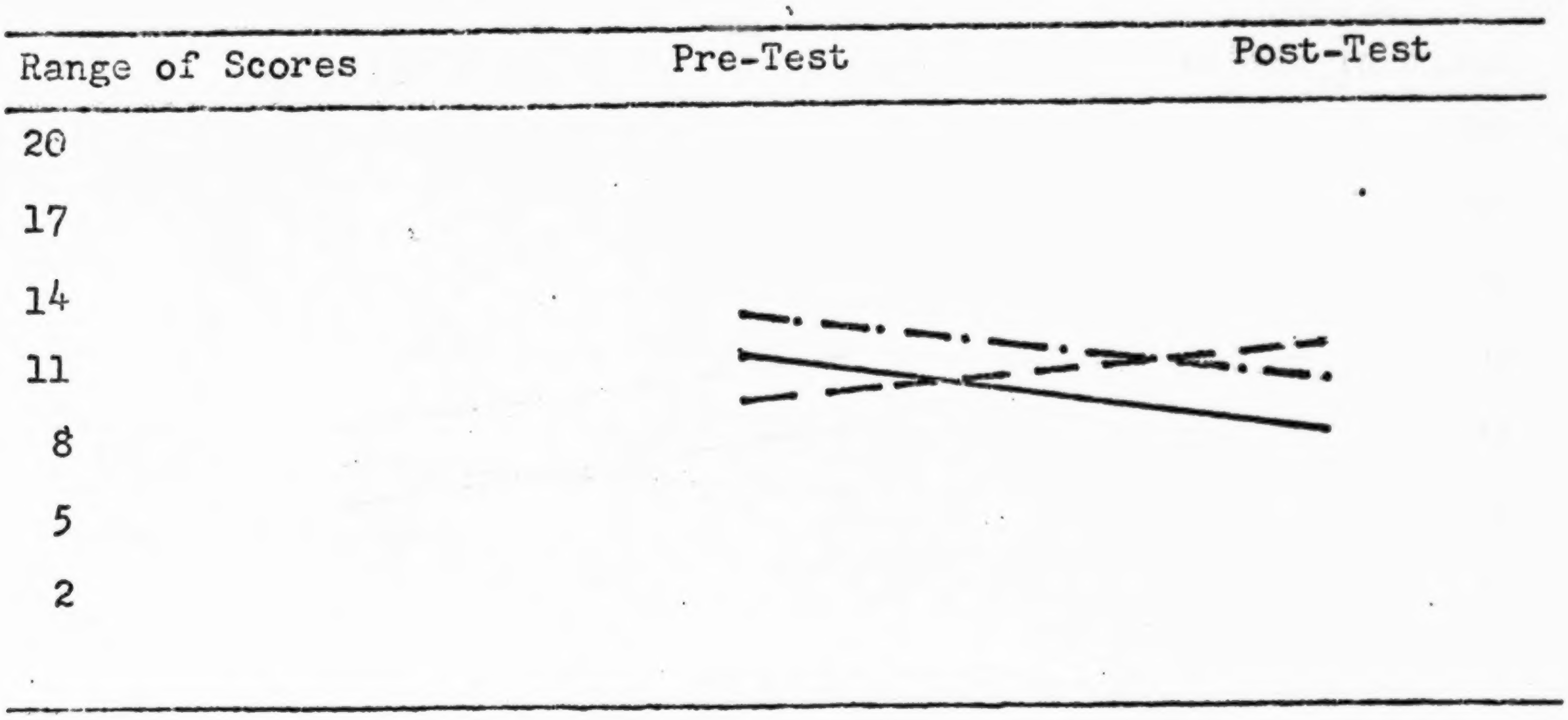

Figure 15

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: TREATMENT BEHAVIORAL CHANGES FOR EXPERIMENTAL AND CONTROL GROUPS

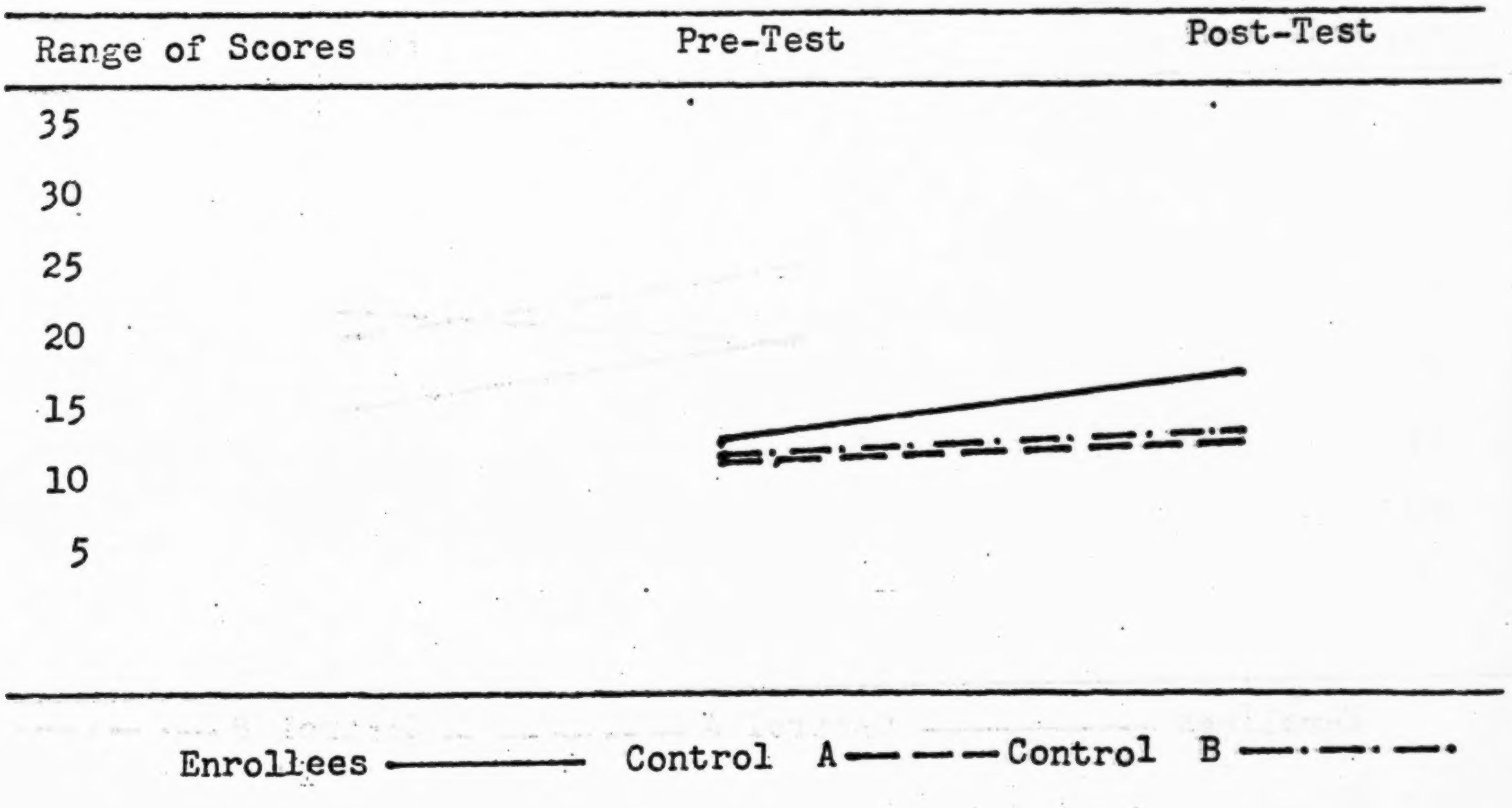

Figure 16

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: TOTAL CLINICAL CHANGES
EXPERIMENTAL AND CONTROL GROUPS

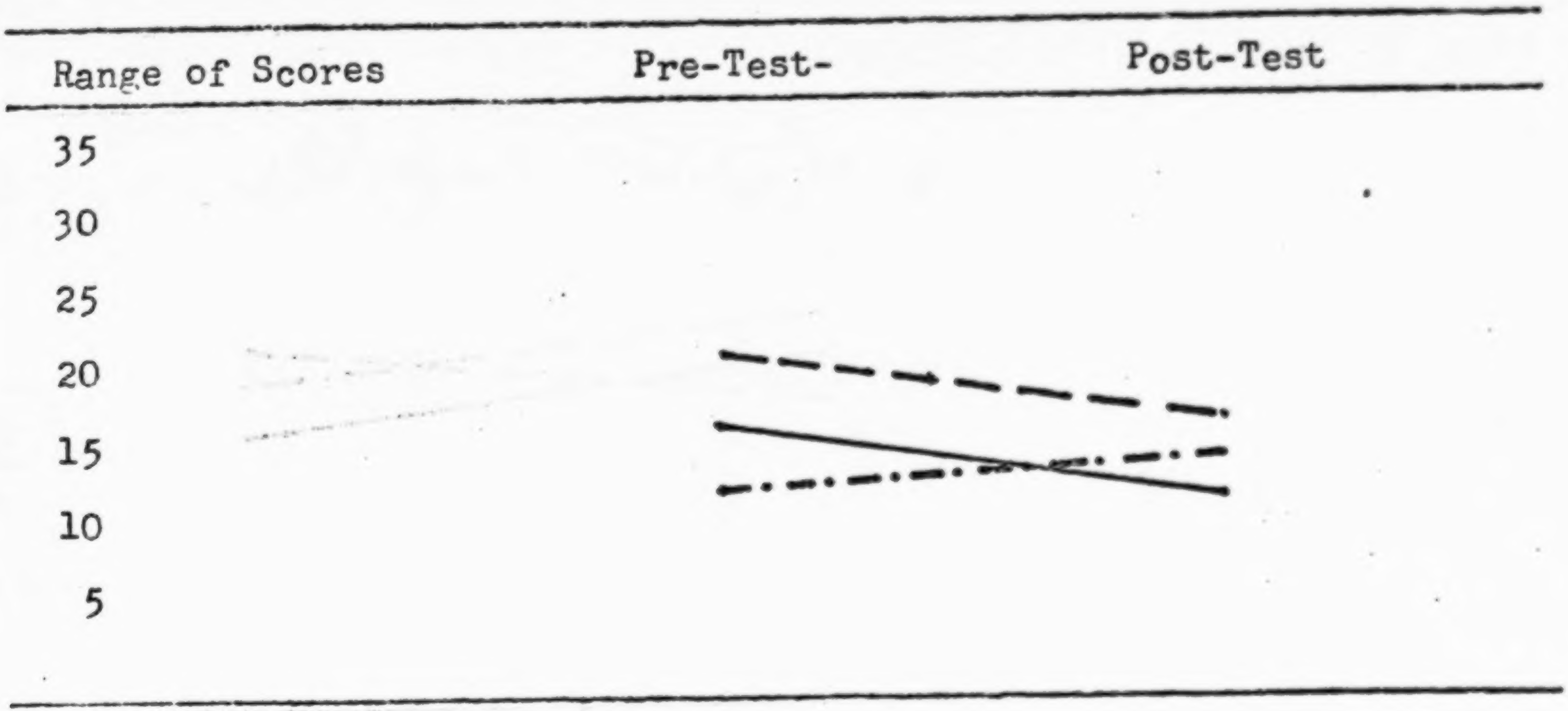

Figure 17

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: TOTAL SELF-CONCEPT CHANGES
EXPERIMENTAL AND CONTROL GROUPS

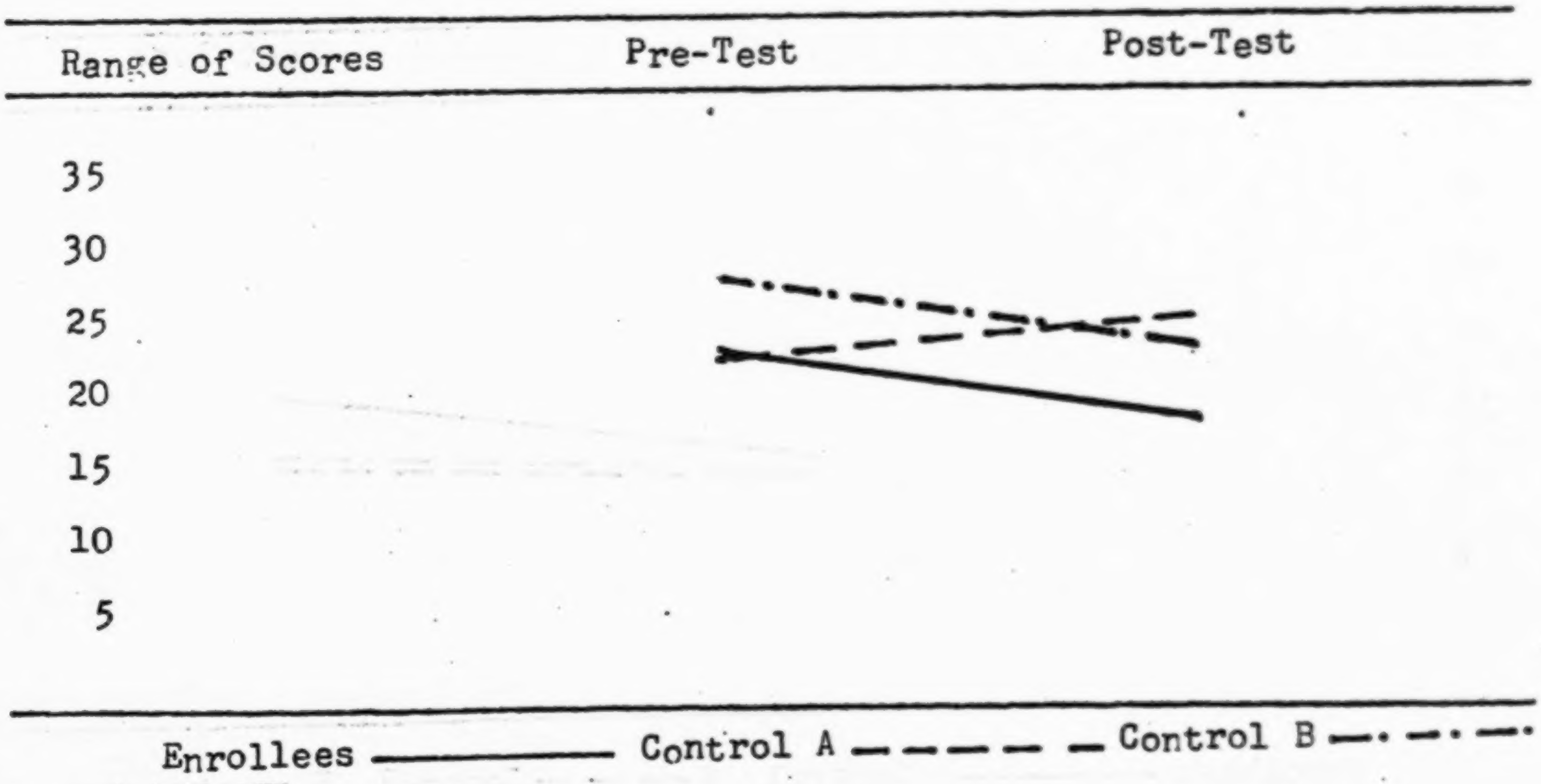

Figure 18

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: TOTAL BEHAVIORAL CHANGES EXPERIMENTAL AND CONTROL GROUPS

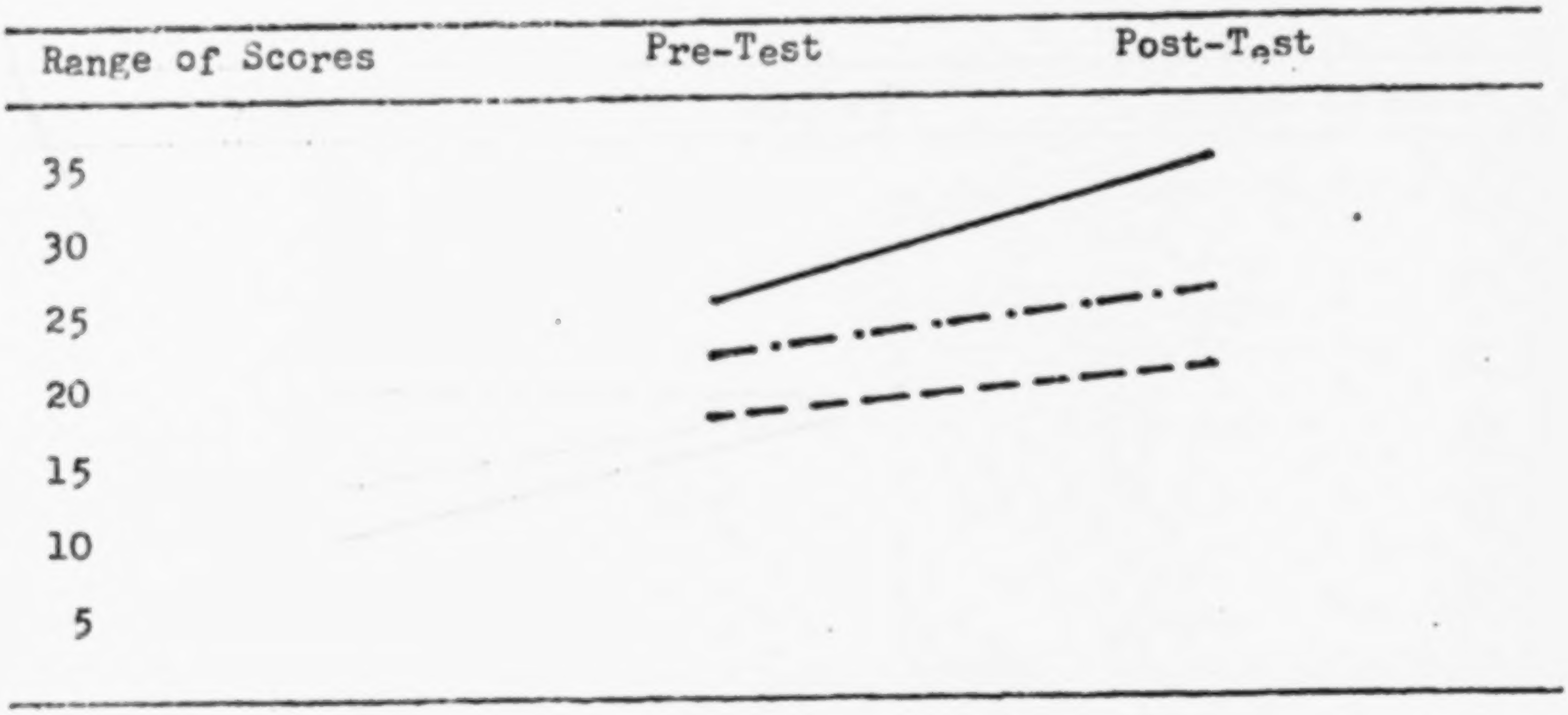

Figure 19

PSYCHOLOGICAL PRACTICES QUESTIONNAIRE: TOTAL ECLECTIC CHANGES EXPERIMENTAL AND CONTROL GROUPS

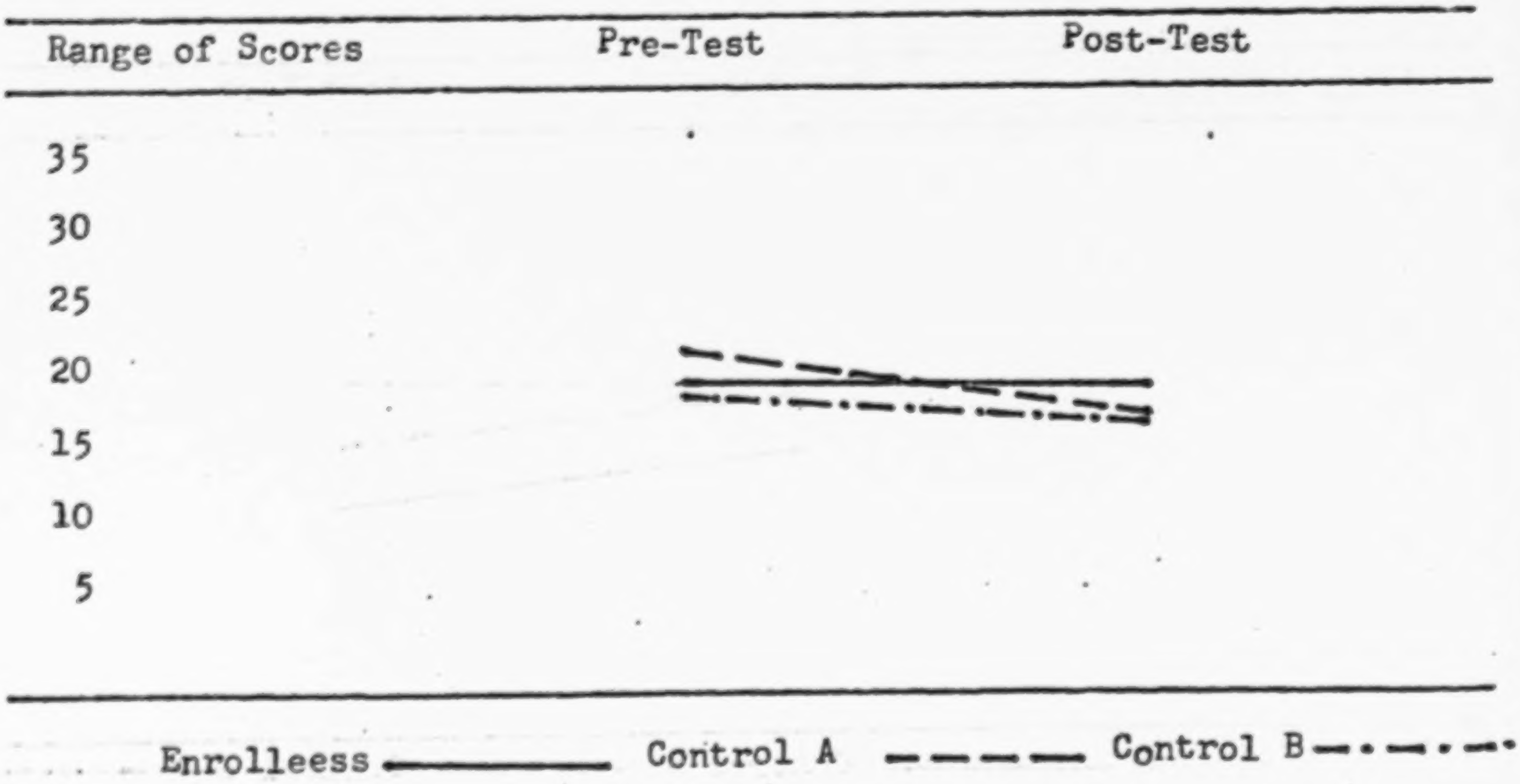

Figure 20

CONCEPT CHECK LIST: TOTAL CLINICAL SCALE CHANGES
EXPERIMENTAL AND CONTROL GROUPS

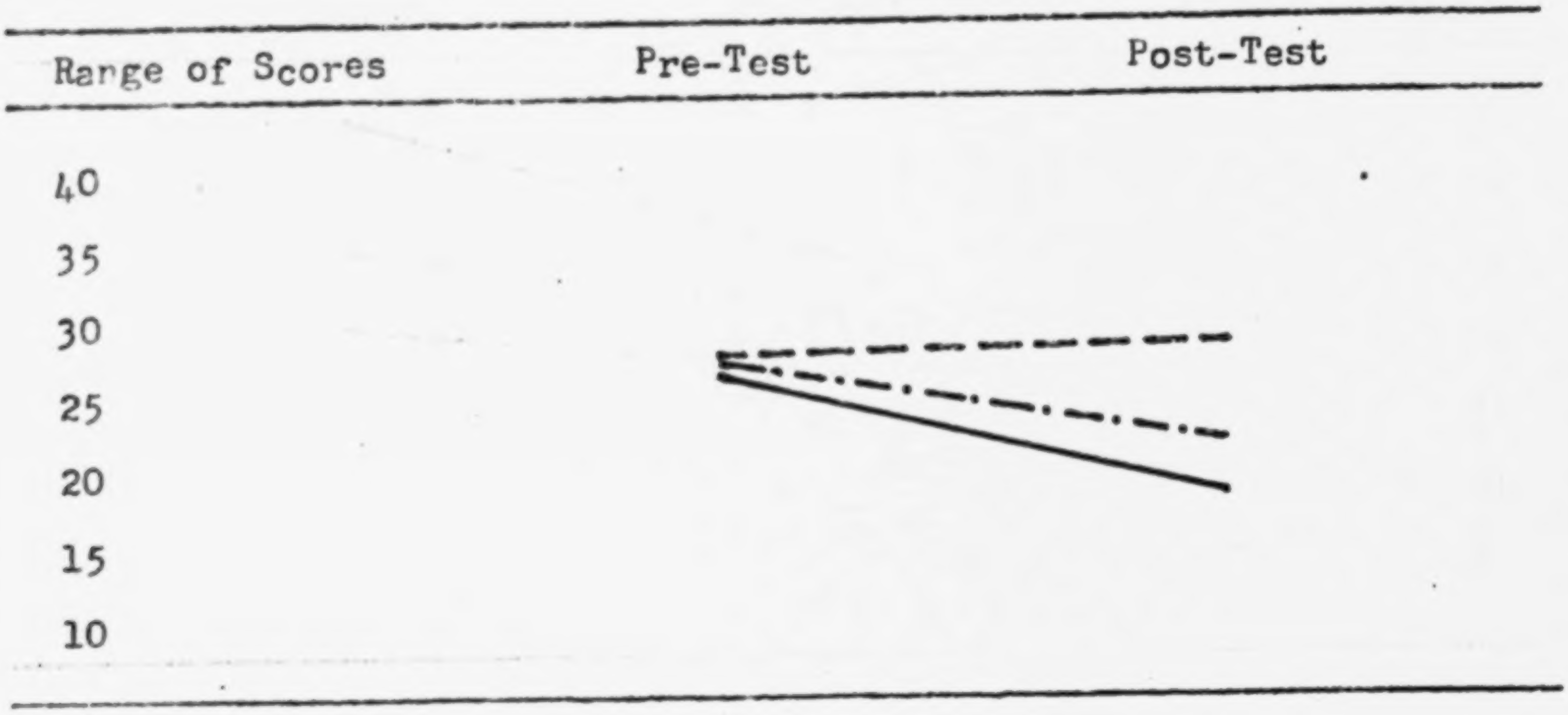

Figure 21

CONCEPT CHECK LIST: TOTAL SELF_CONCEPT SCALE CHANGES
EXPERIMENTAL AND CONTROL GROUPS

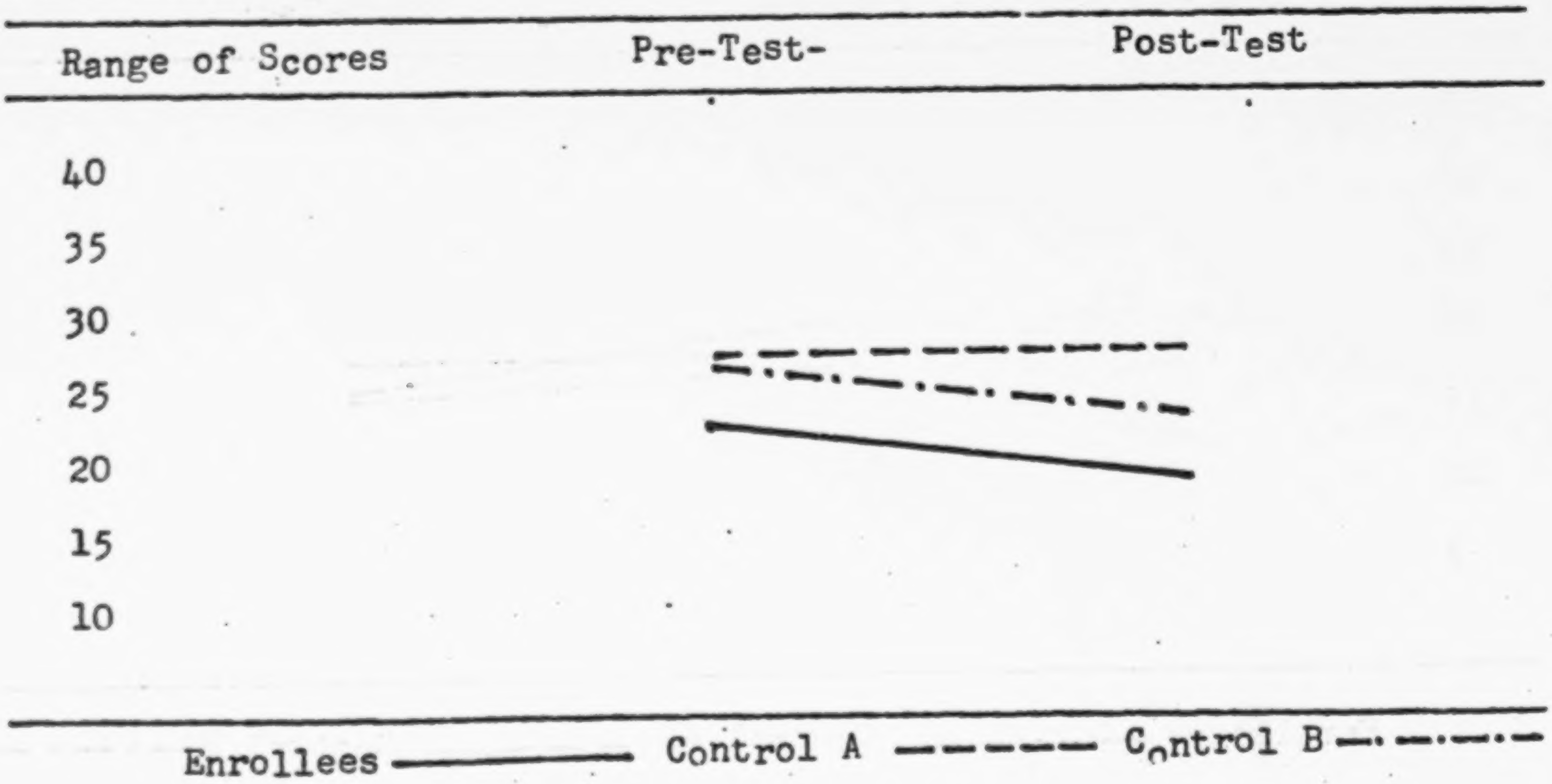

Figure 22

CONCEPT CHECK LIST: TOTAL BEHAVIORAL CHANGES
EXPERIMENTAL AND CONTROL GROUPS

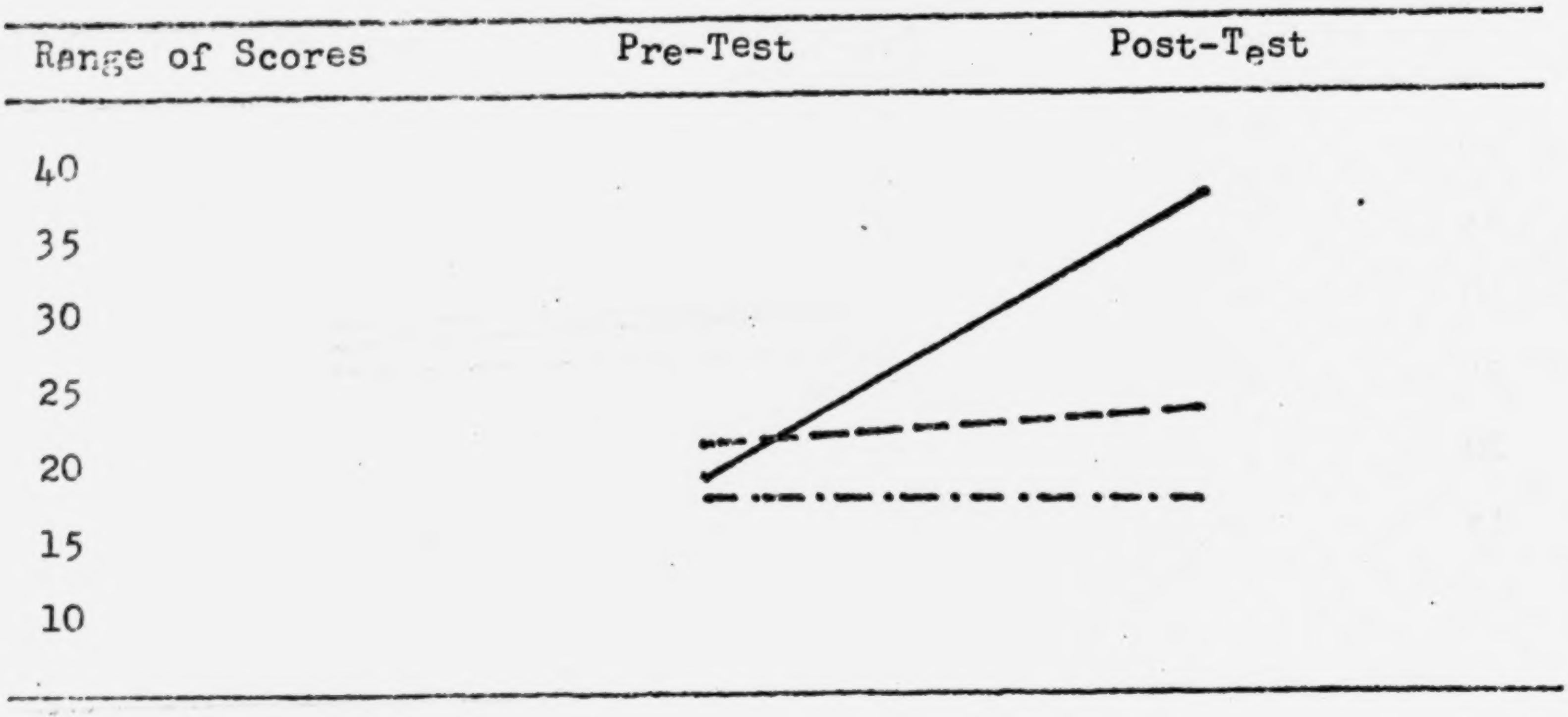

Figure 23

SERVICES QUESTIONNAIRE: SERVICES TO INDIVIDUAL REAL CHANGES
EXPERIMENTAL AND CONTROL GROUPS

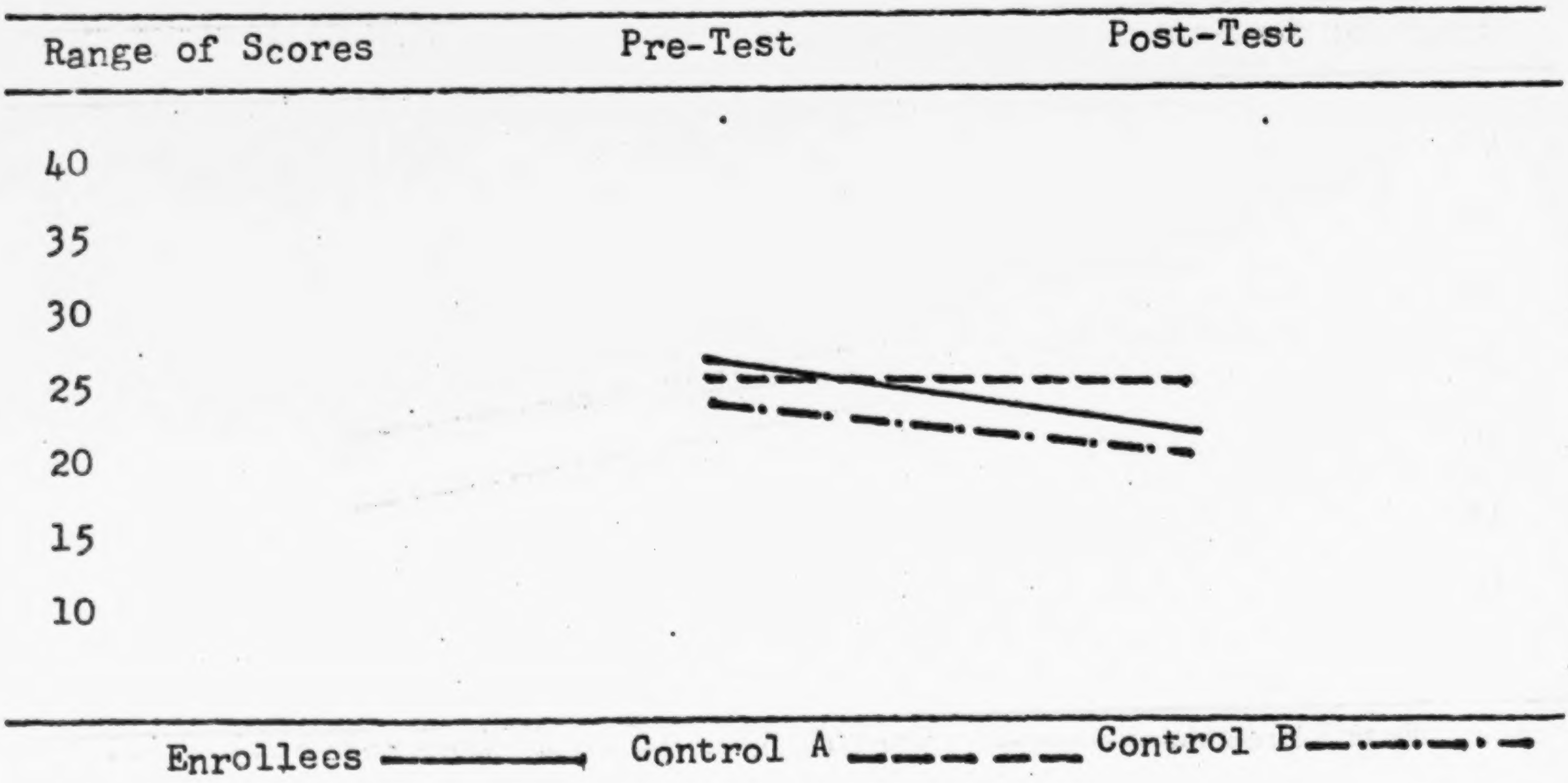

Figure 24

SERVICES QUESTIONNAIRE: SERVICES TO INDIVIDUAL IDEAL CHANGES
EXPERIMENTAL AND CONTROL GROUPS

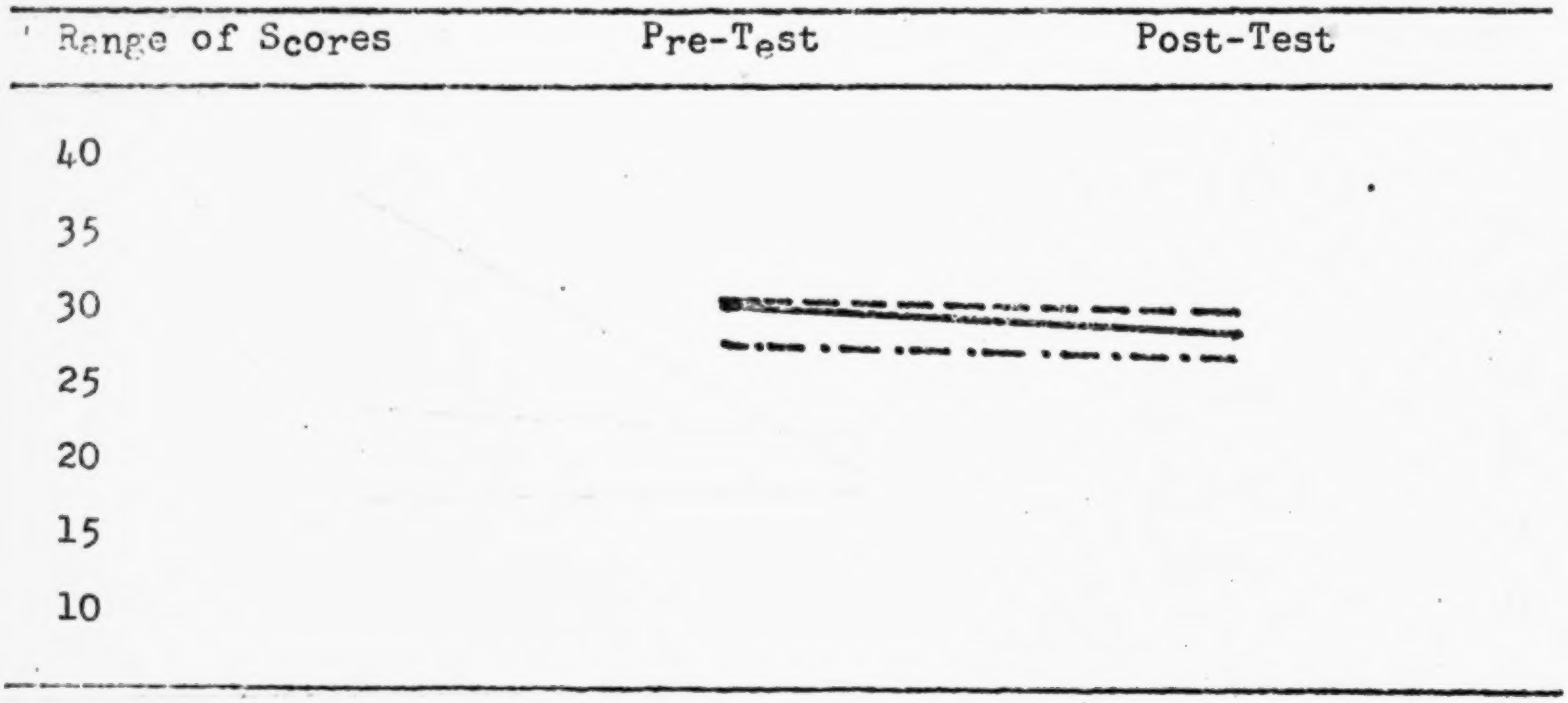

Figure 25

SERVICES QUESTIONNAIRE: SERVICES SCHOOL AS WHOLE REAL CHANGES
EXPERIMENTAL AND CONTROL GROUPS

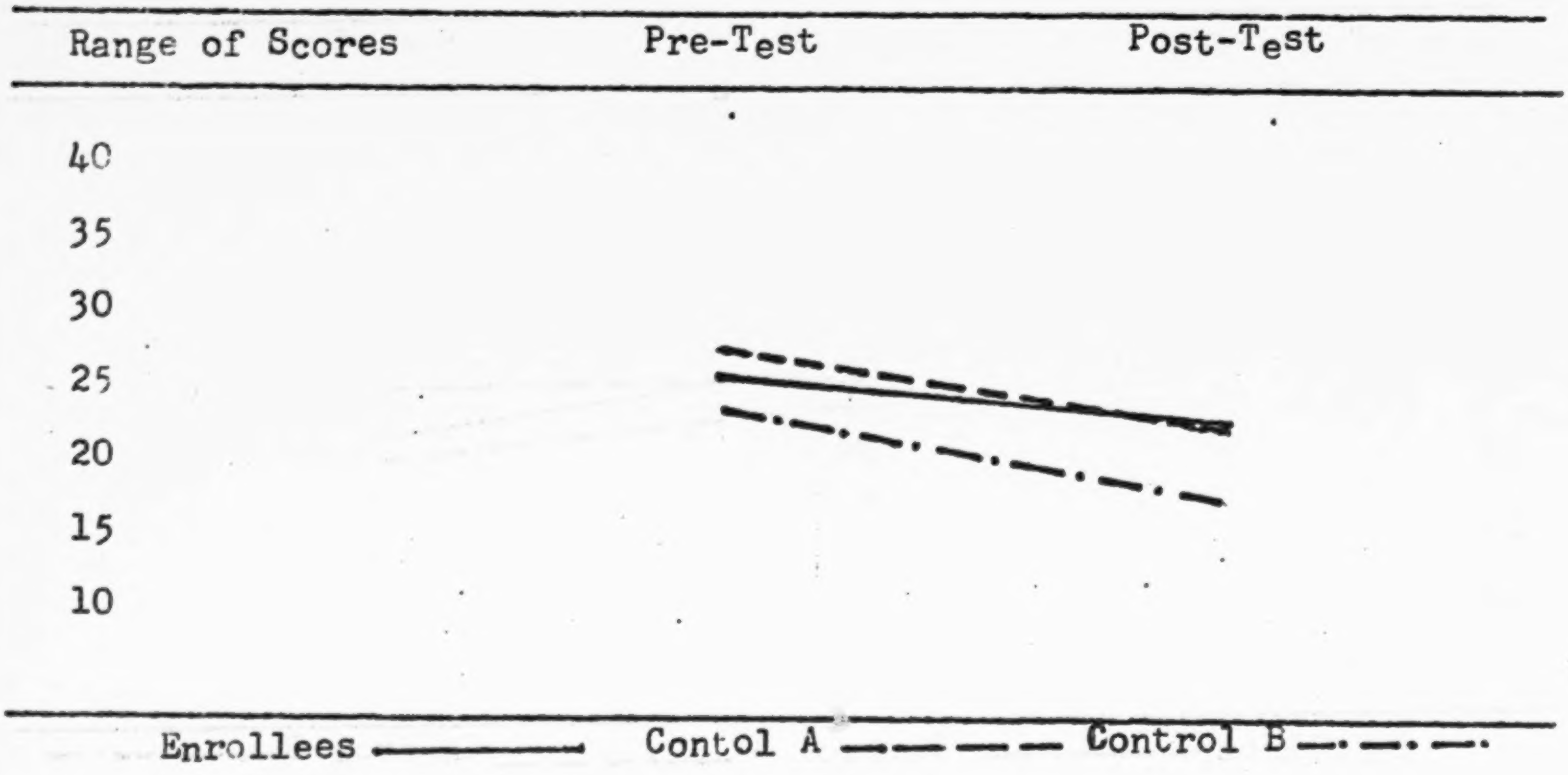

Figure 26

SERVICES QUESTIONNAIRE: SERVICES SCHOOL AS A WHOLE IDEAL CHANGES EXPERIMENTAL AND CONTROL GROUPS

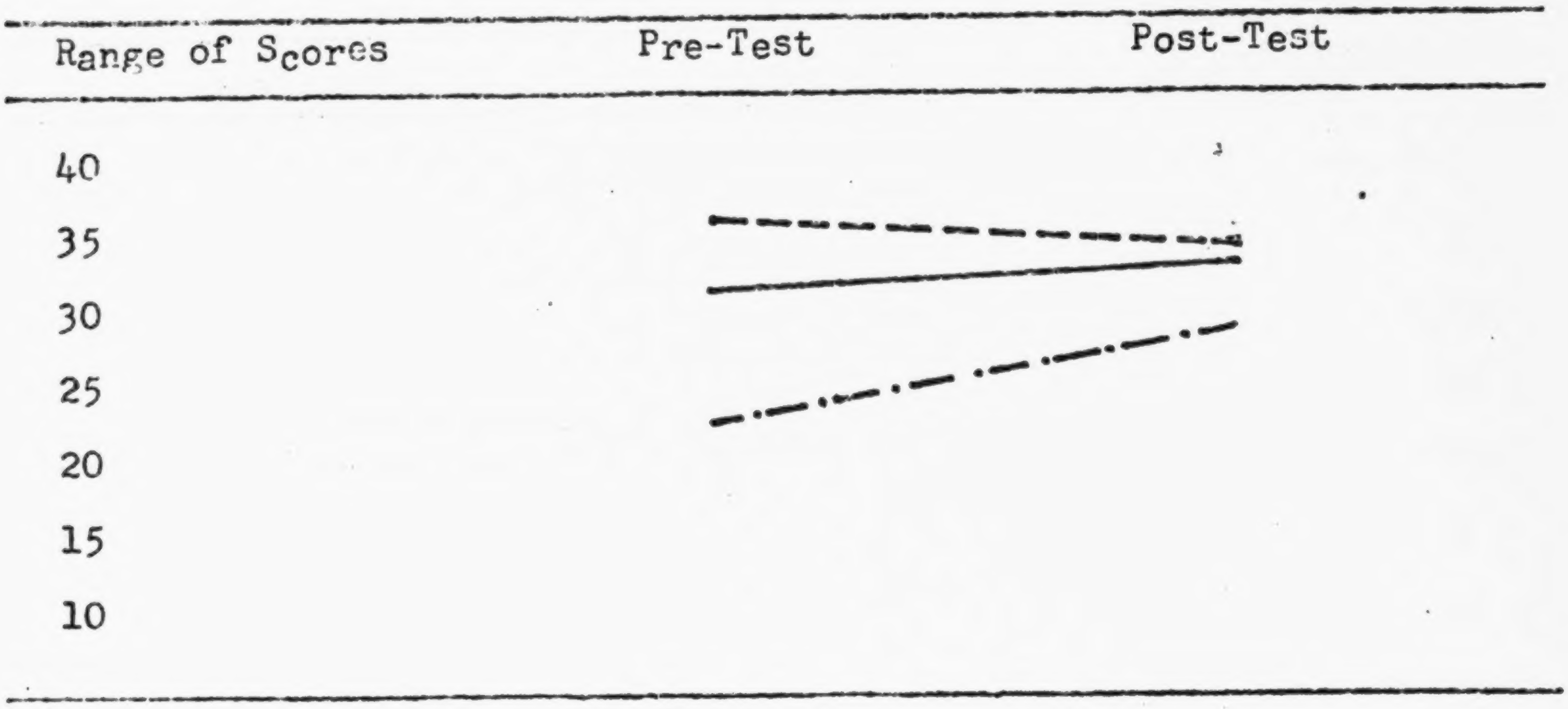

Figure 27

SERVICES QUESTIONNAIRE: RESEARCH REAL SCALE CHANGES EXPERIMENTAL AND CONTROL GROUPS

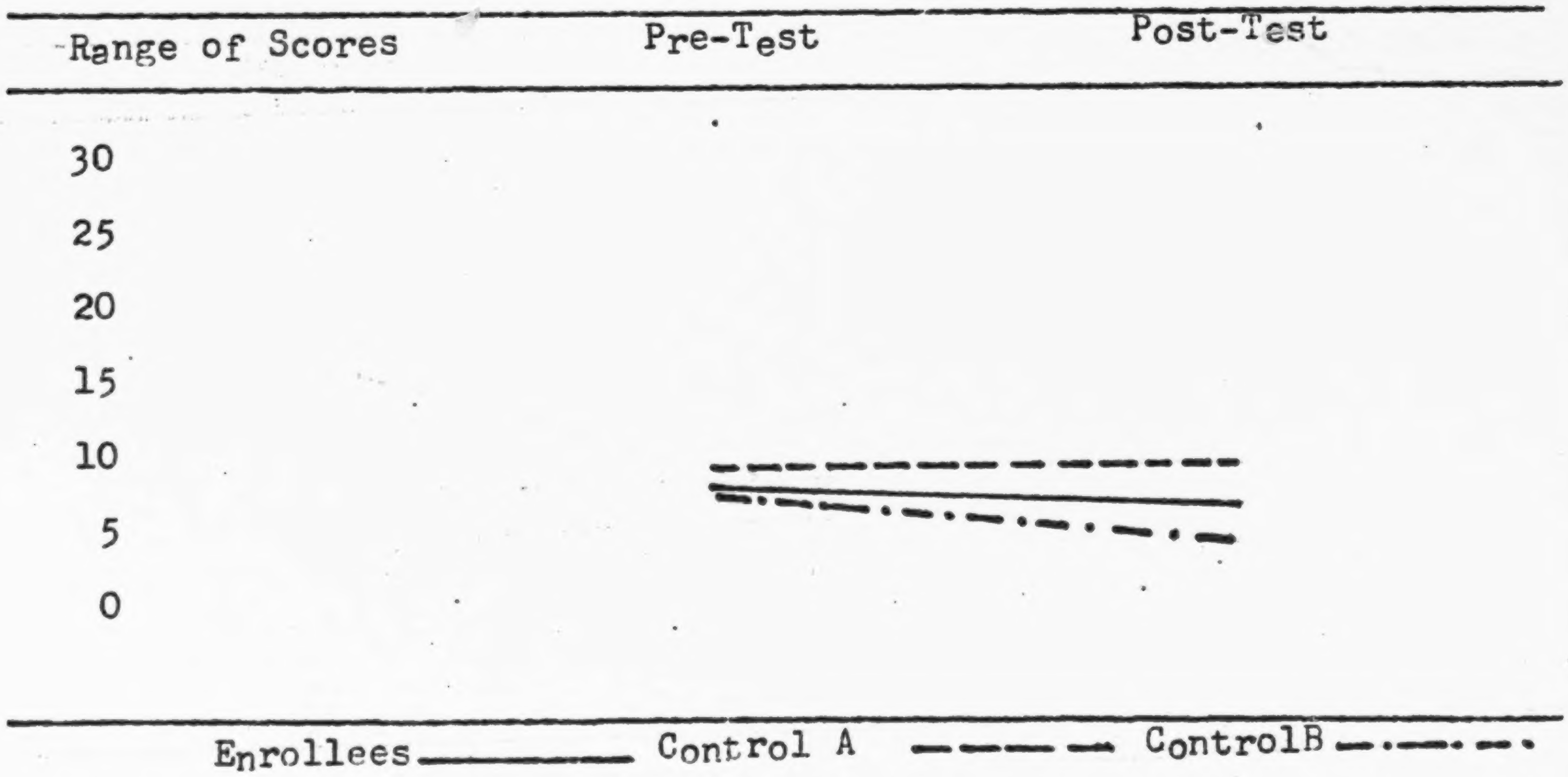

Figure 28

SERVICES QUESTIONNAIRE: RESEARCH IDEAL SCALE CHANGES
EXPERIMENTAL AND CONTROL GROUPS

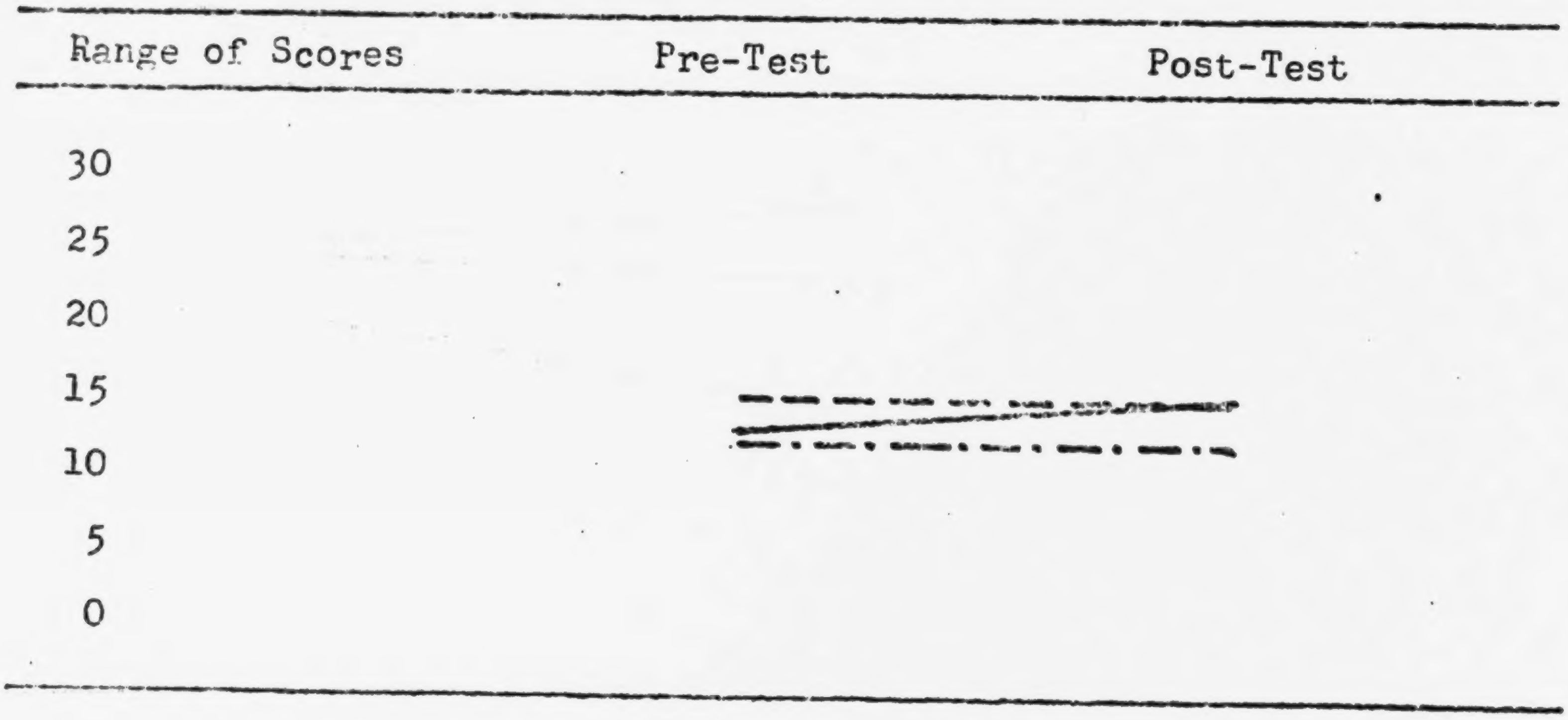

Figure 29

SERVICES QUESTIONNAIRE: COMMUNITY REAL SCALE CHANGES
EXPERIMENTAL AND CONTROL GROUPS

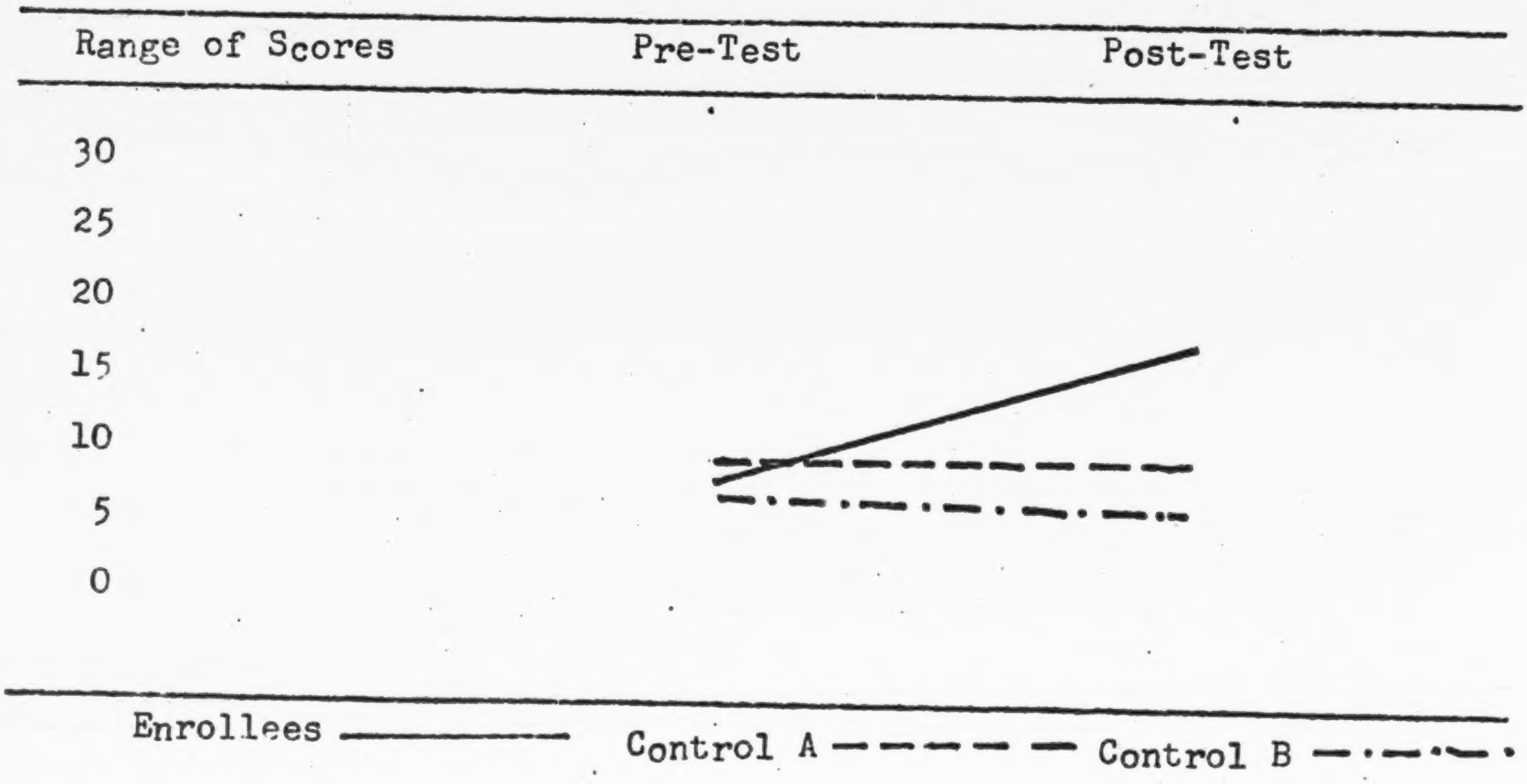

Figure 30

SERVICES QUESTIONNAIRE: COMMUNITY IDEAL SCALE CHANGES
EXPERIMENTAL AND CONTROL GROUPS

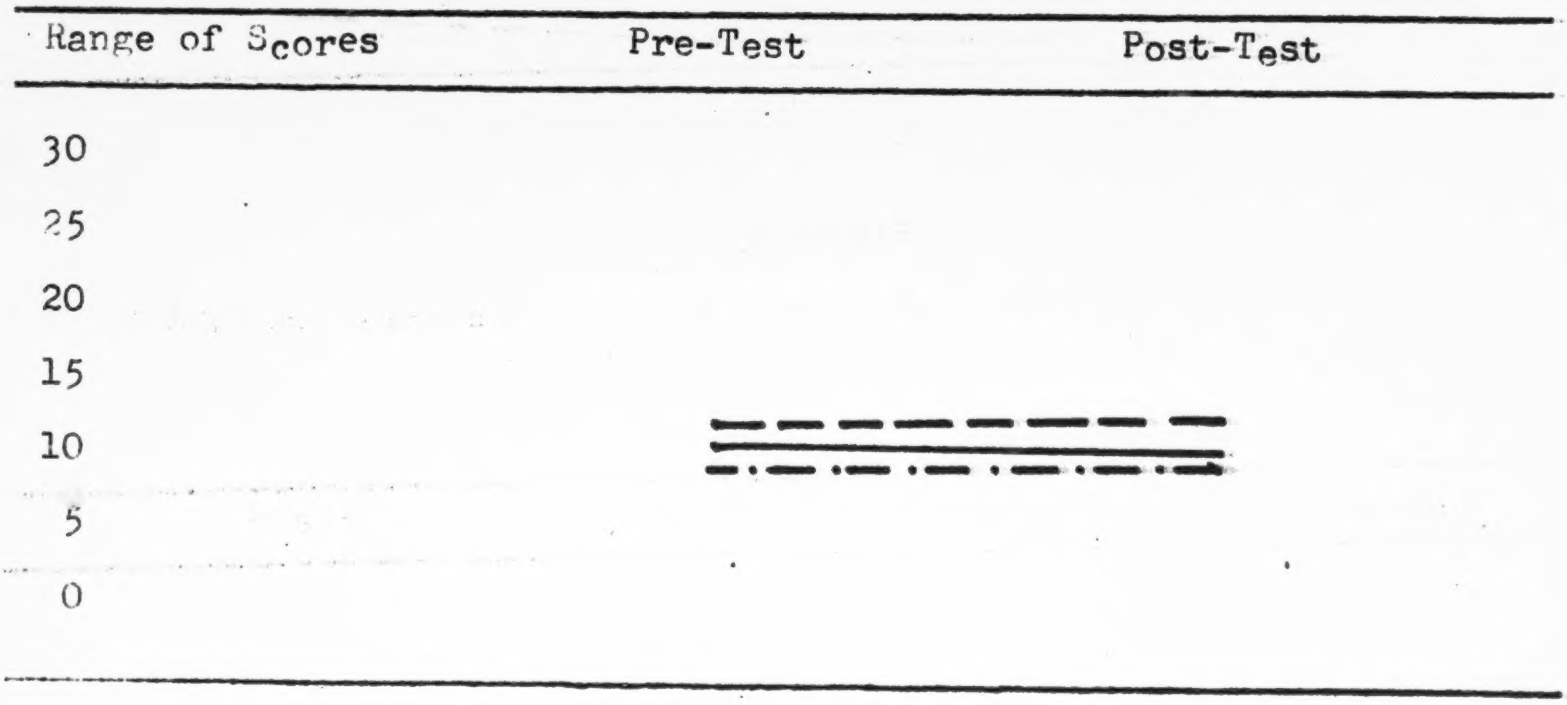

Figure 31

SUM OF STRUCTURE: PROPER RAPPORT OBSERVATION CHANGES
EXPERIMENTAL AND CONTROL GROUPS

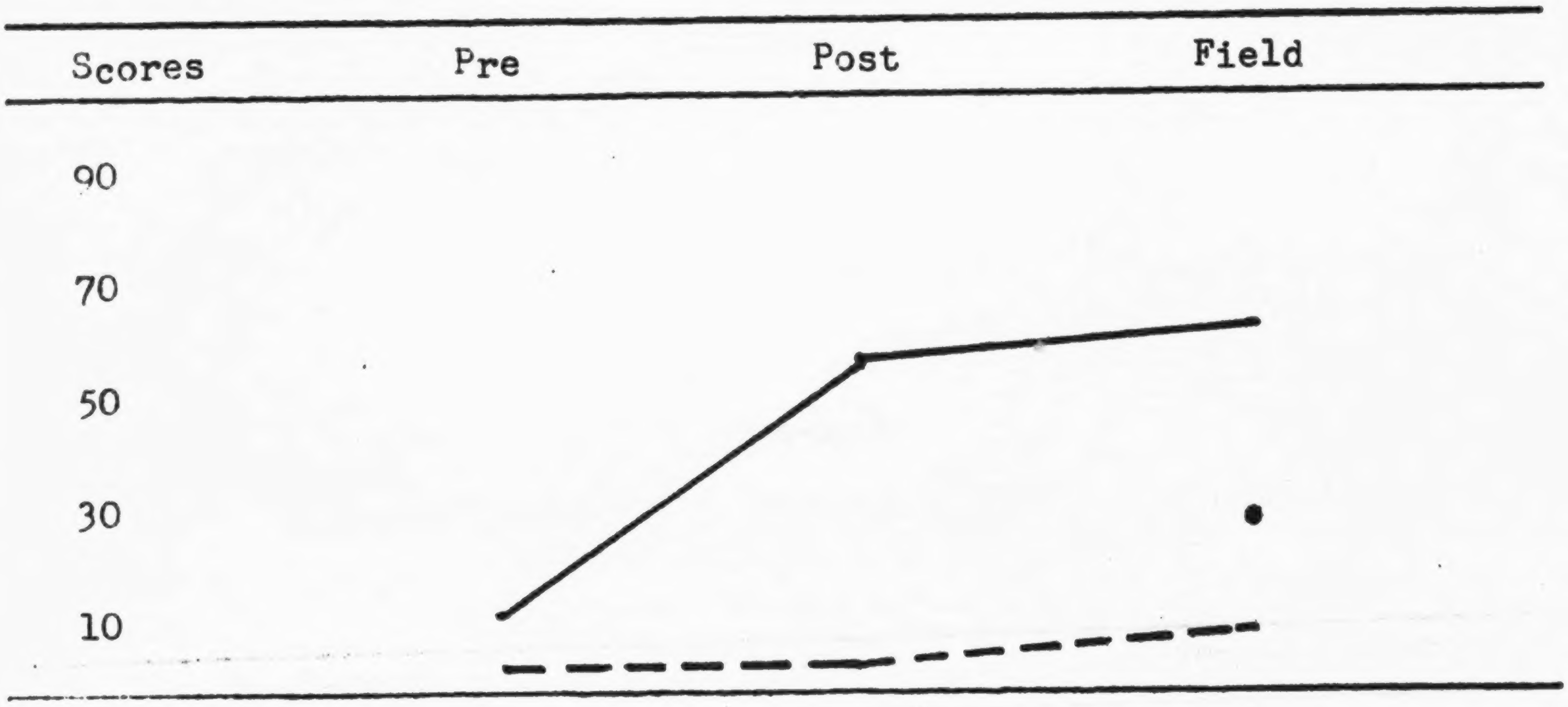

Figure 32

SUM OF STRUCTURE: BEHAVIORAL RESPONSE OBSERVATION CHANGES
EXPERIMENTAL AND CONTROL GROUPS

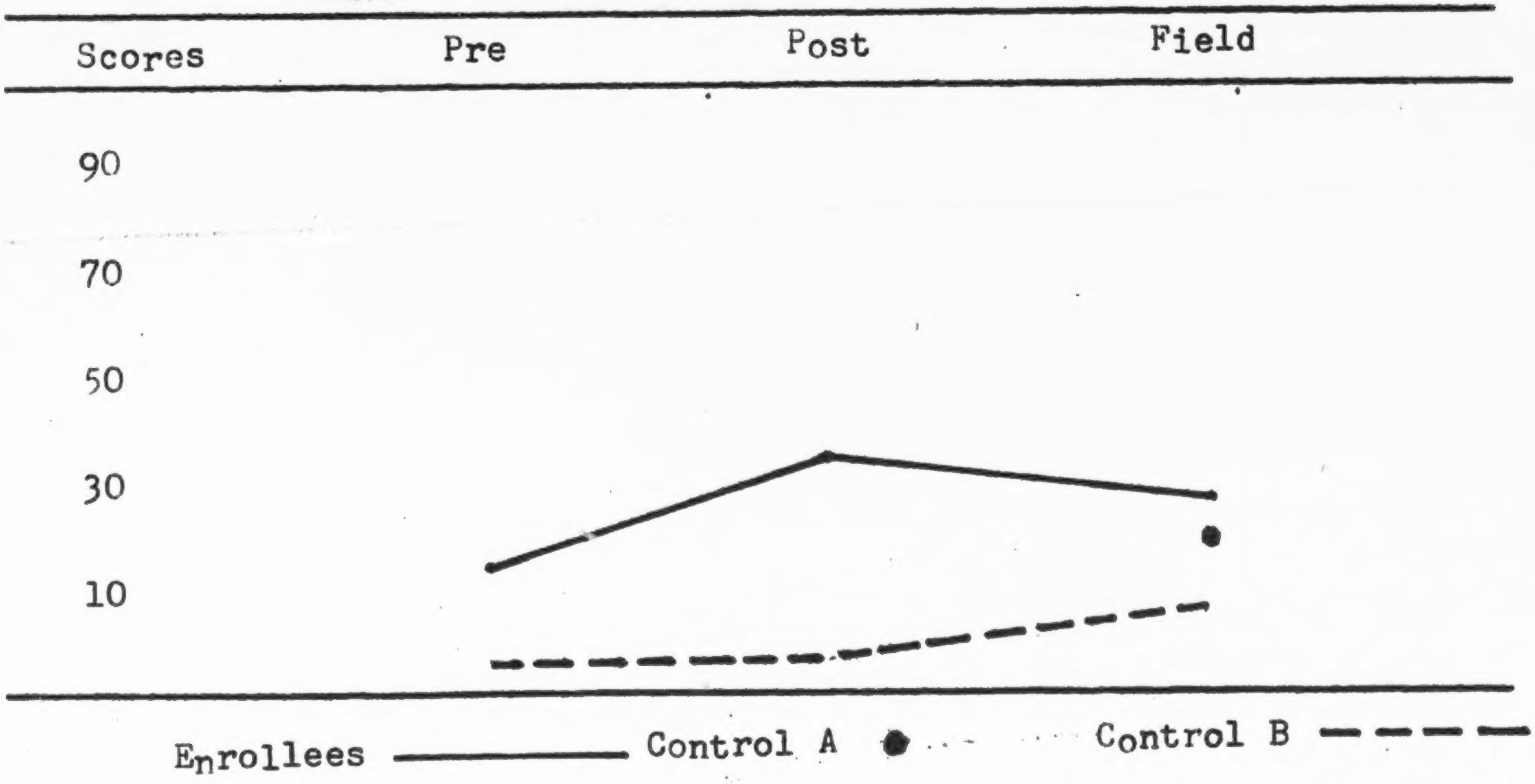

Figure 33

SUM OF ASSESSMENT: BEHAVIORAL RESPONSES OBSERVATION CHANGES
EXPERIMENTAL AND CONTROL GROUPS

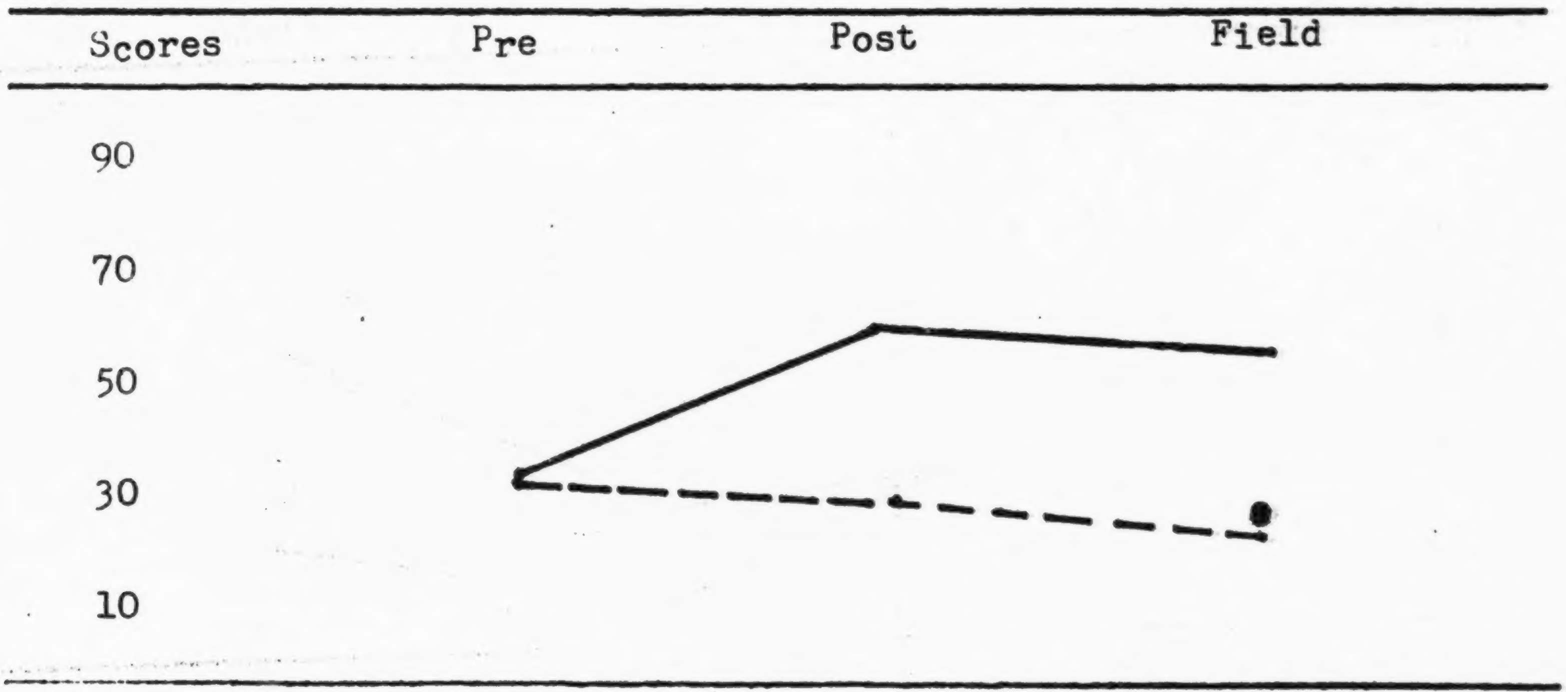

Figure 34

SUM OF ASSESSMENT: NEUTRAL RESPONSES OBSERVATION CHANGES
EXPERIMENTAL AND CONTROL GROUPS

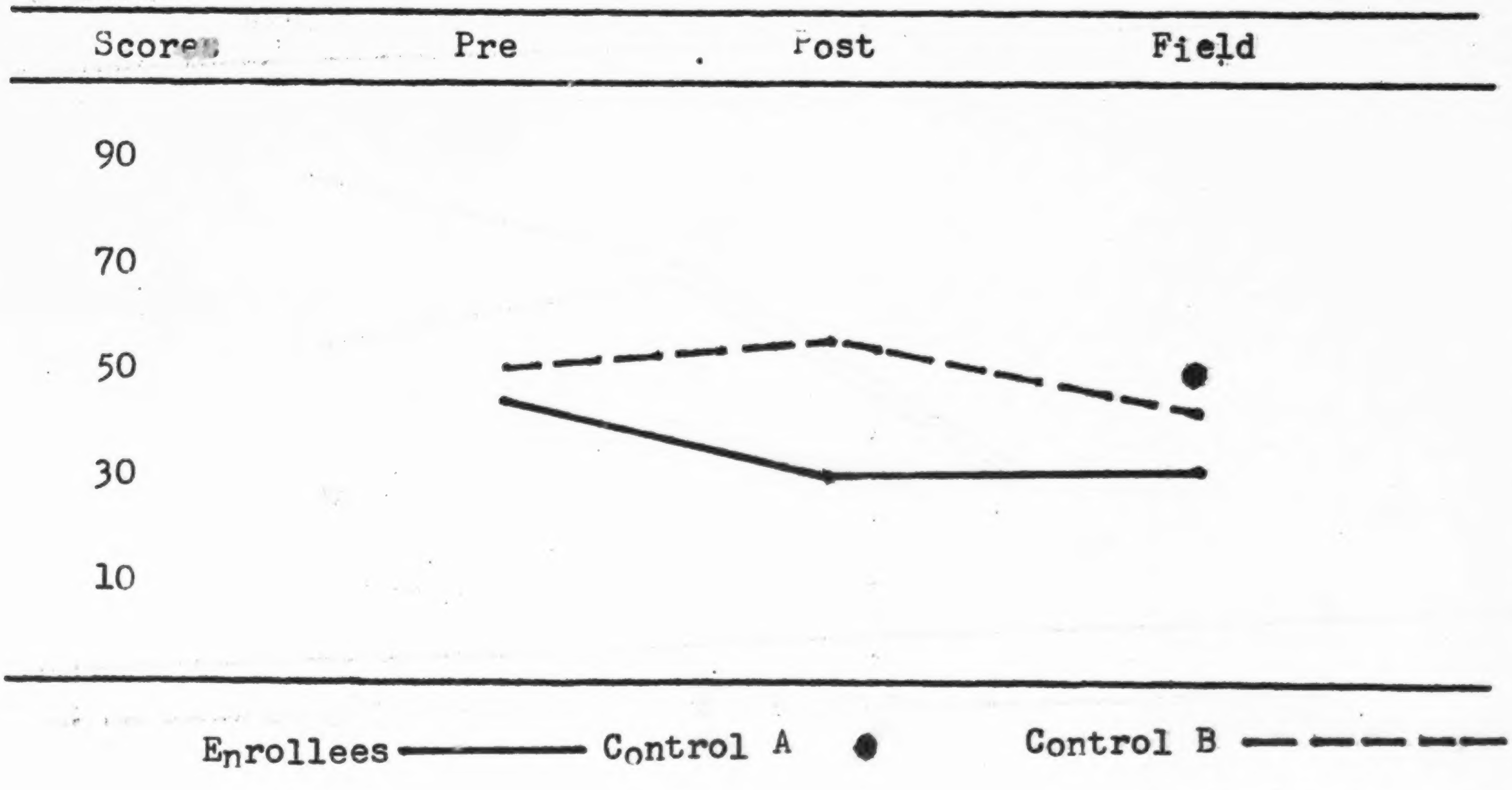

Figure 35

SUM OF ASSESSMENT: DYNAMIC RESPONSES OBSERVATION CHANGES
EXPERIMENTAL AND CONTROL GROUPS

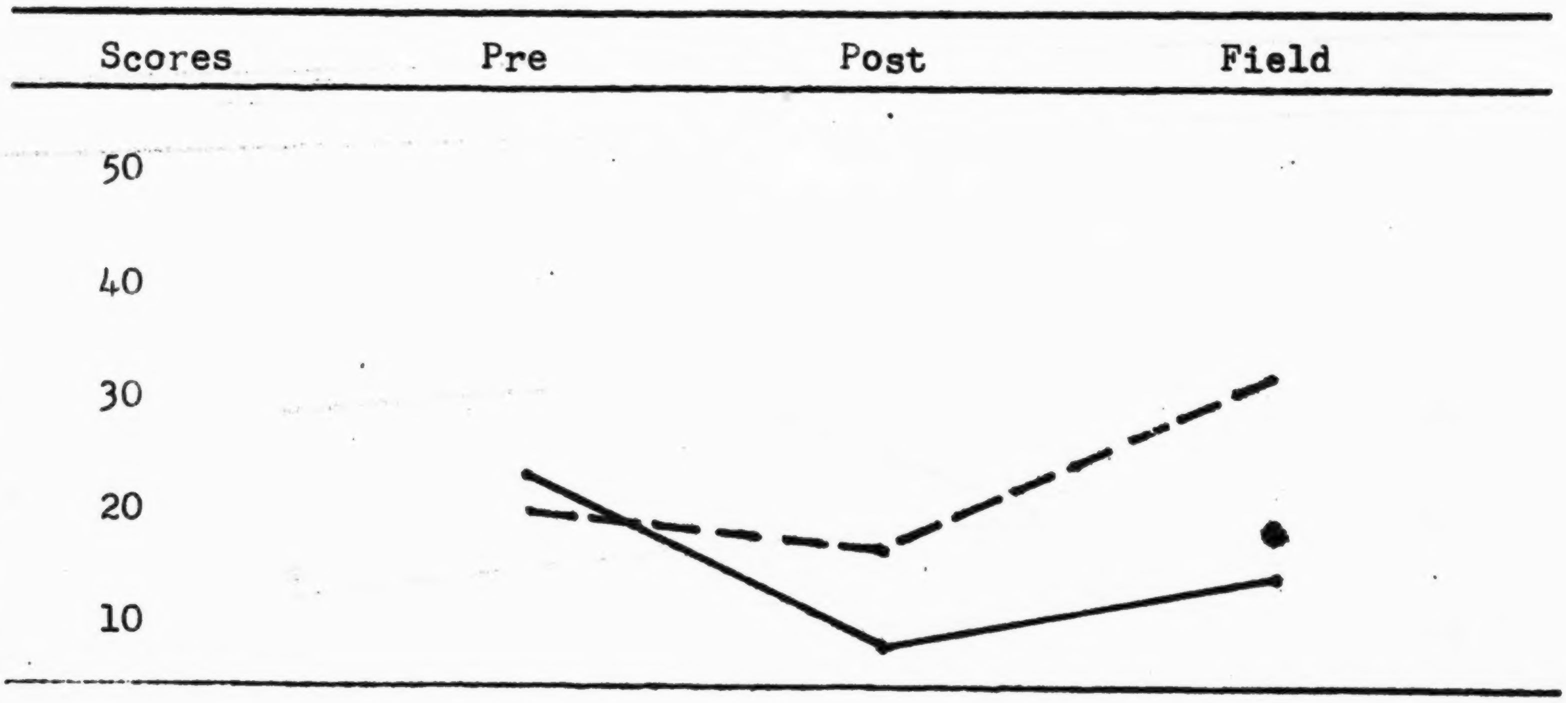

Figure 36

SUM OF STRATEGY: BEHAVIORAL STRATEGY OBSERVATION CHANGES
EXPERIMENTAL AND CONTROL GROUPS

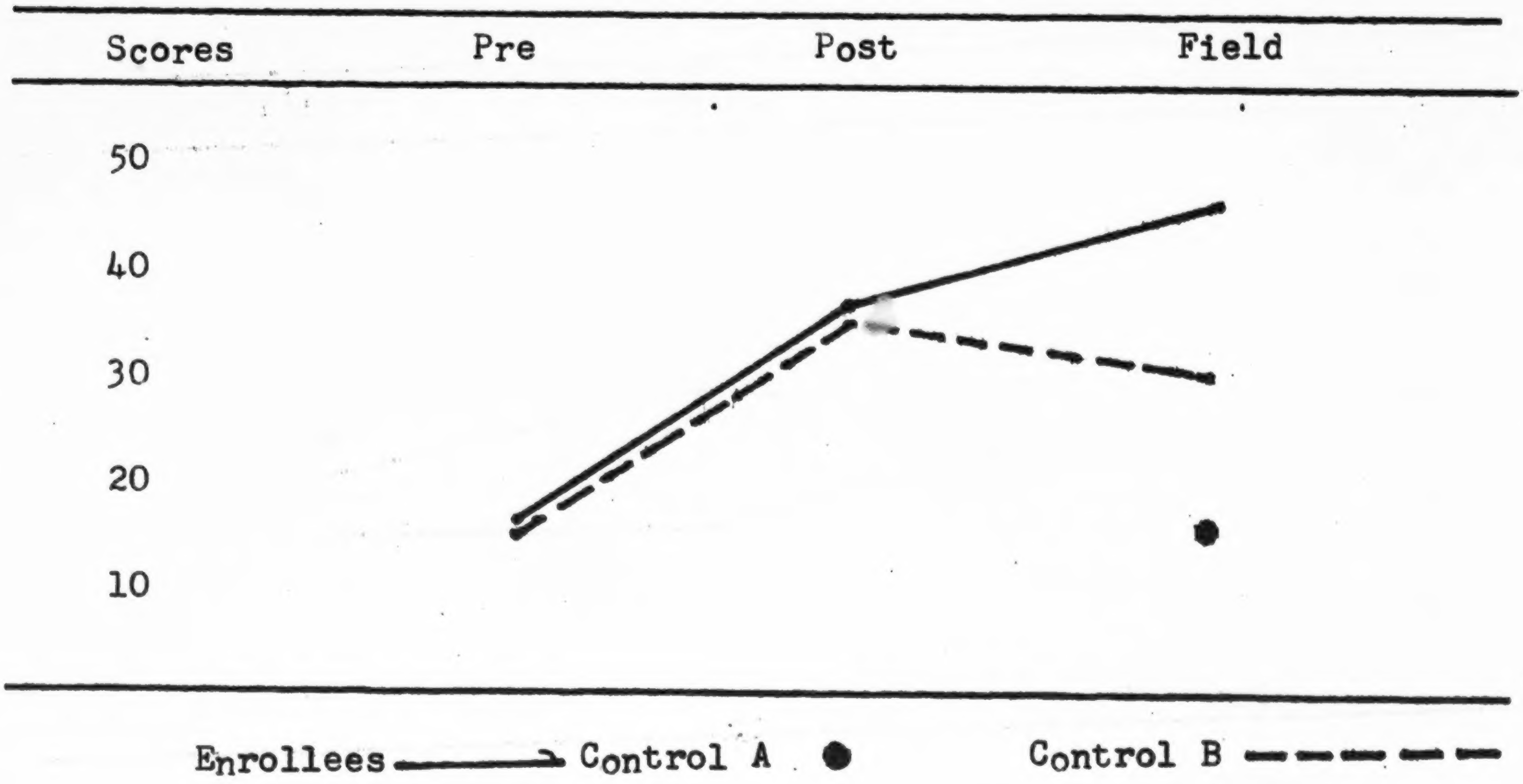

Figure 37

SUM OF STRATEGY: NON-SPECIFIC STRATEGY OBSERVATION CHANGES EXPERIMENTAL AND CONTROL GROUPS

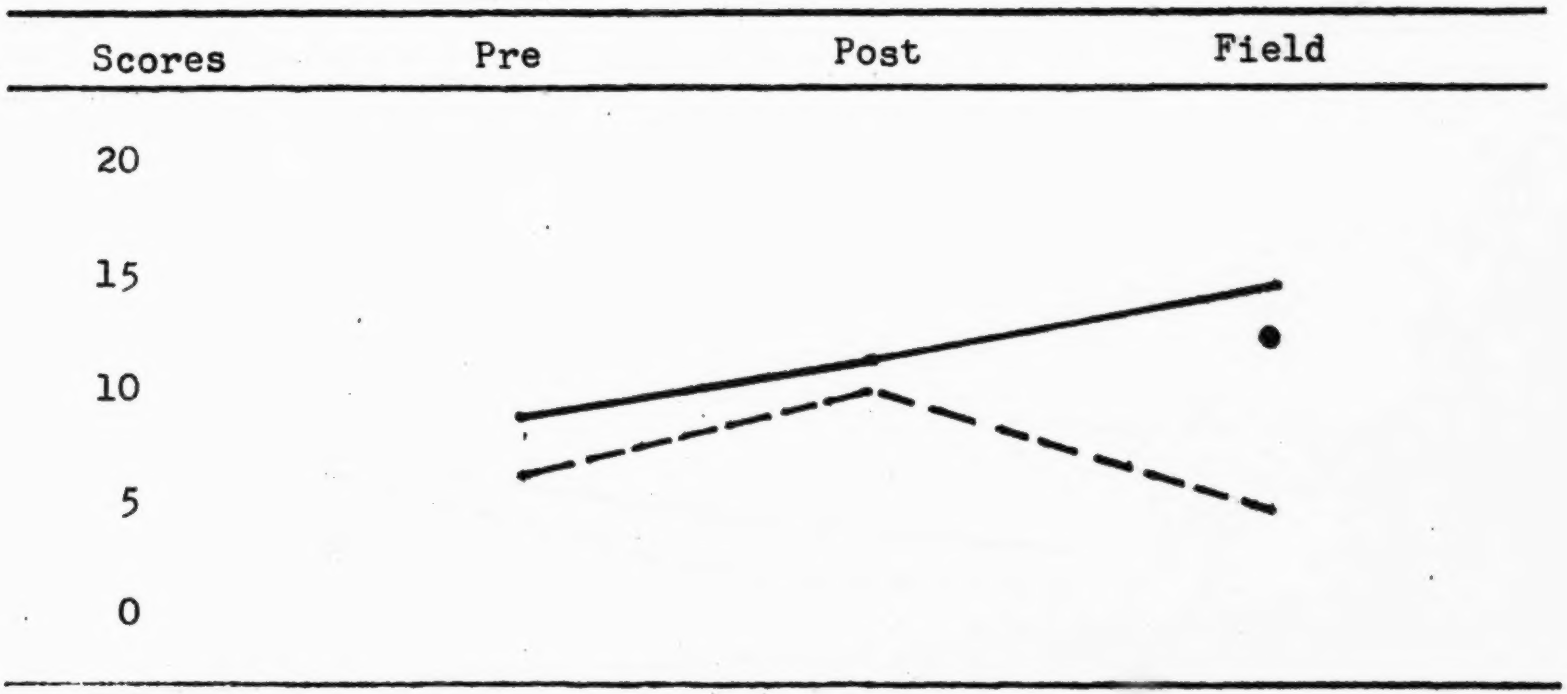

Figure 38

SUM OF STRATEGY: DYNAMIC RESPONSES OBSERVATION CHANGES EXPERIMENTAL AND CONTROL GROUPS

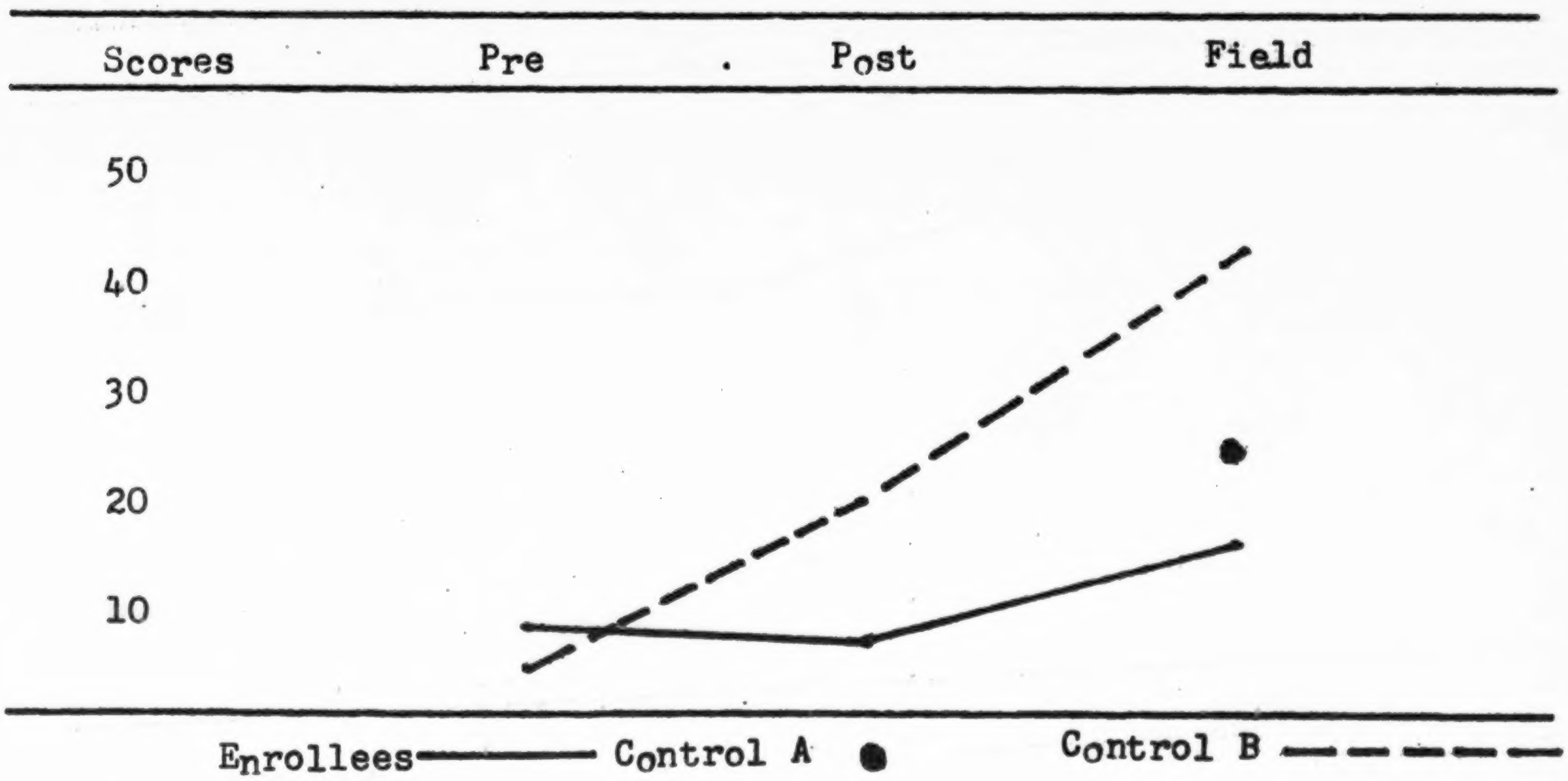

Figure 39

PROPORTION OF STRUCTURE TO TOTAL RESPONSES
EXPERIMENTAL AND CONTROL GROUPS

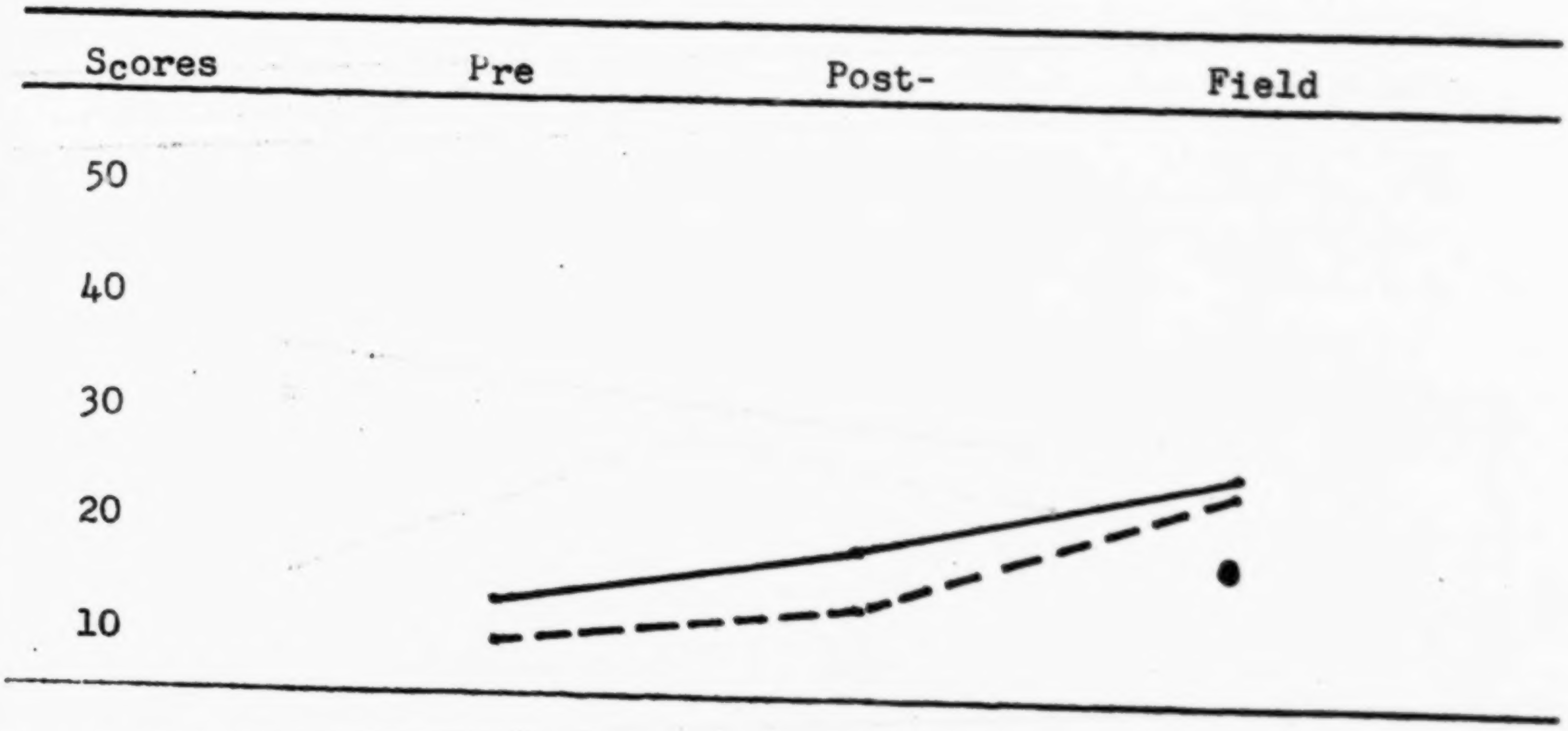

Figure 40

PROPORTION OF ASSESSMENT RESPONSES TO TOTAL
EXPERIMENTAL AND CONTROL GROUPS

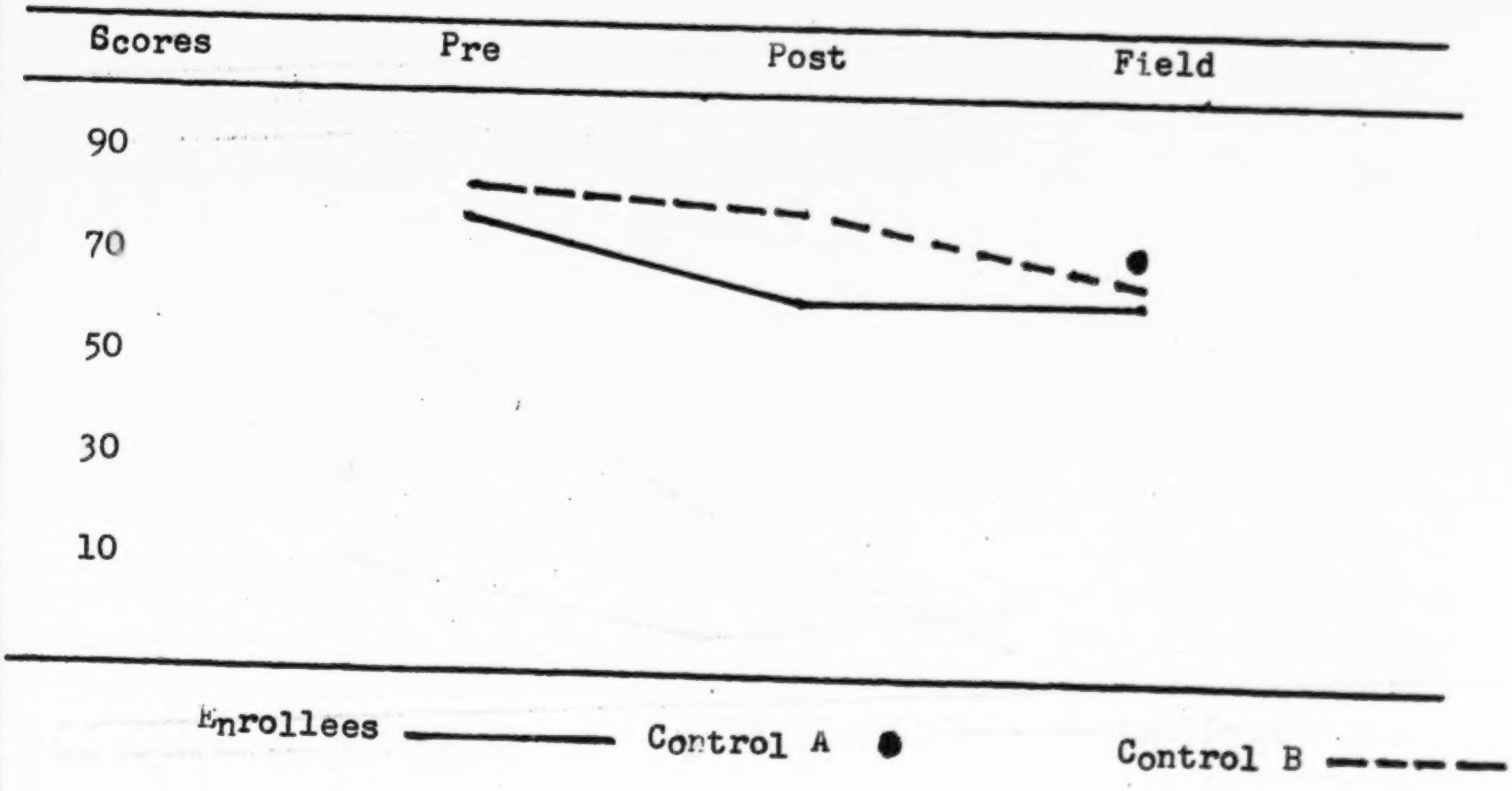

Figure 41

PROPORTION OF STRATEGY/PLANNING RESPONSES TO TOTAL EXPERIMENTAL AND CONTROL GROUPS

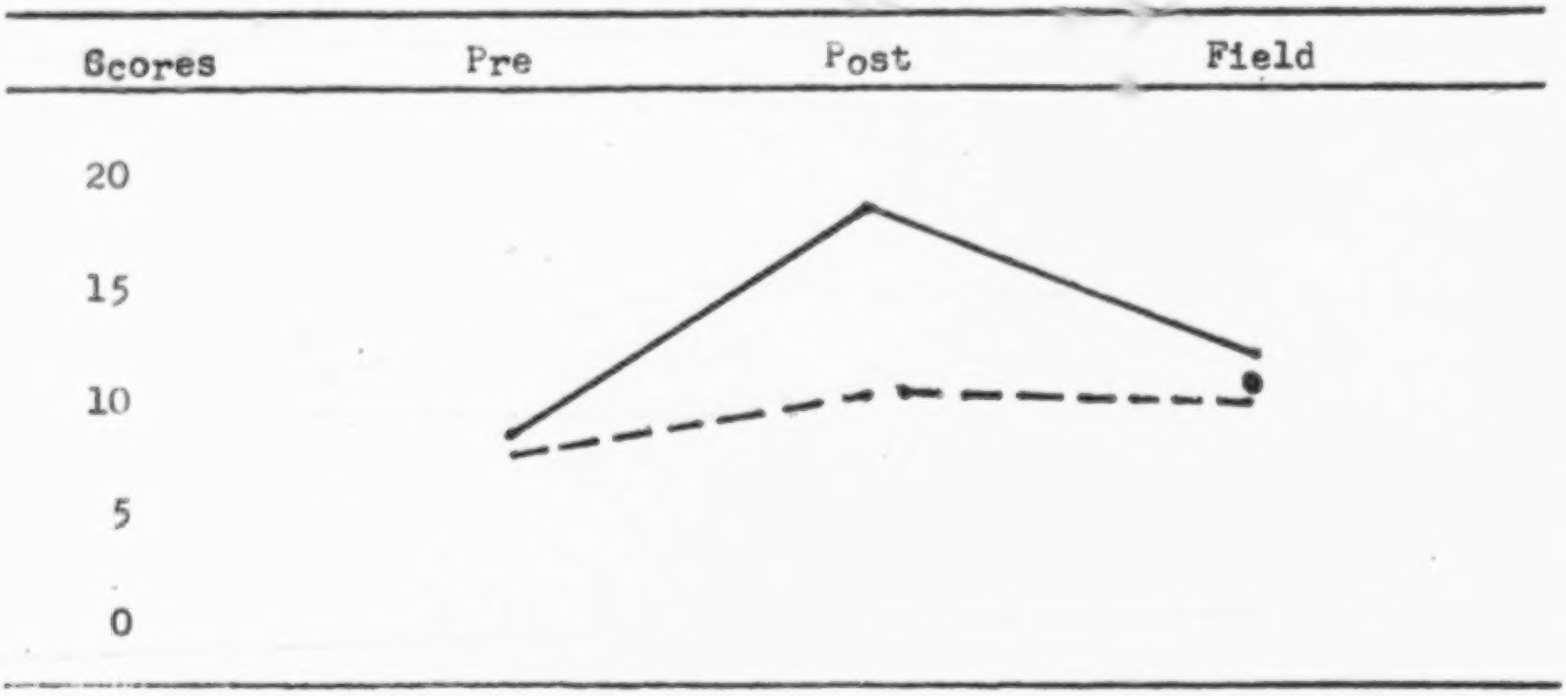

Figure 42

PROPORTION BEHAVIORAL RESPONSES TO TOTAL EXPERIMENTAL AND CONTROL GROUPS

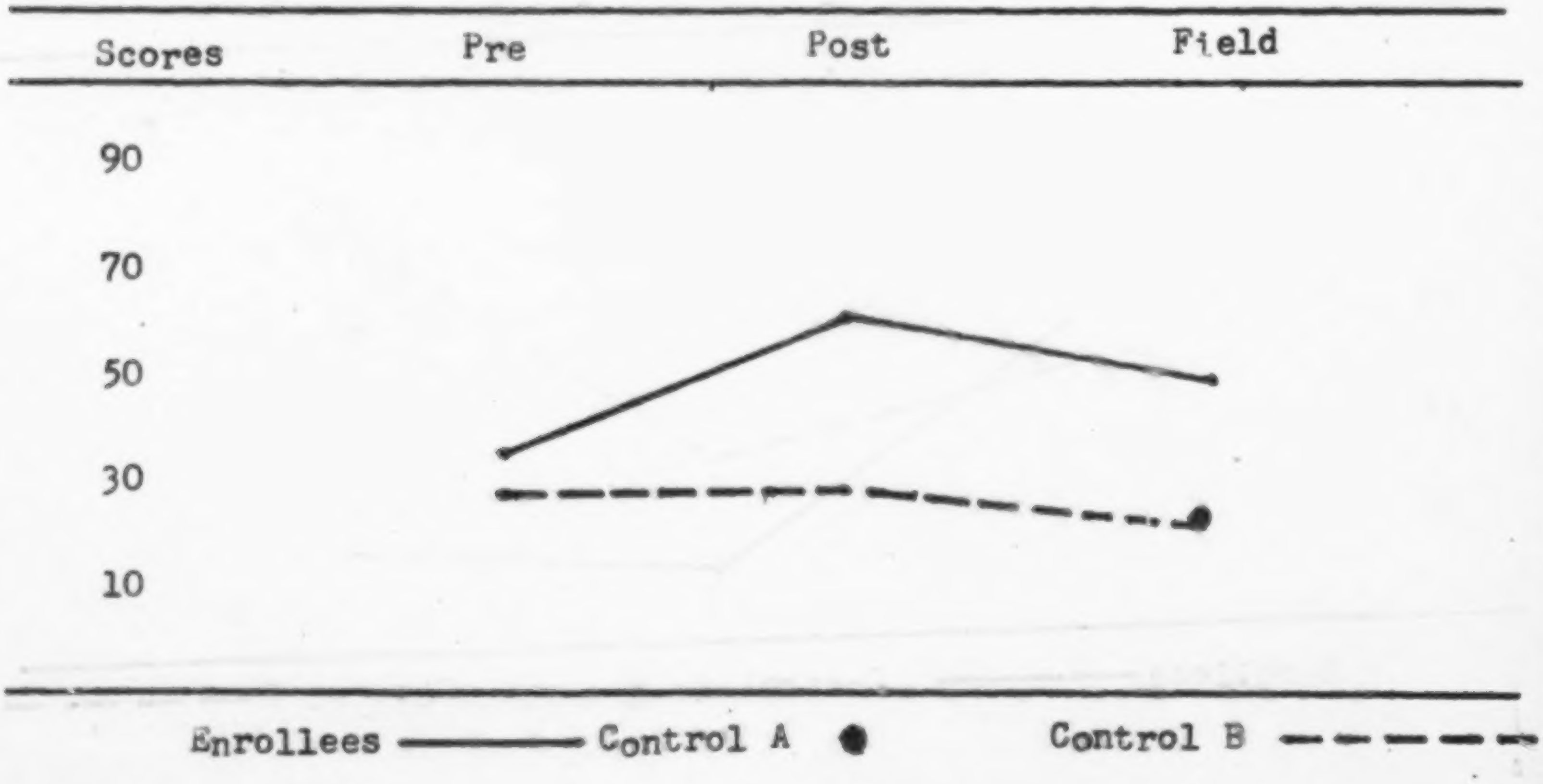

Figure 43

PROPORTION OF NEUTRAL RESPONSES TO TOTAL OBSERVATIONS
EXPERIMENTAL AND CONTROL GROUPS

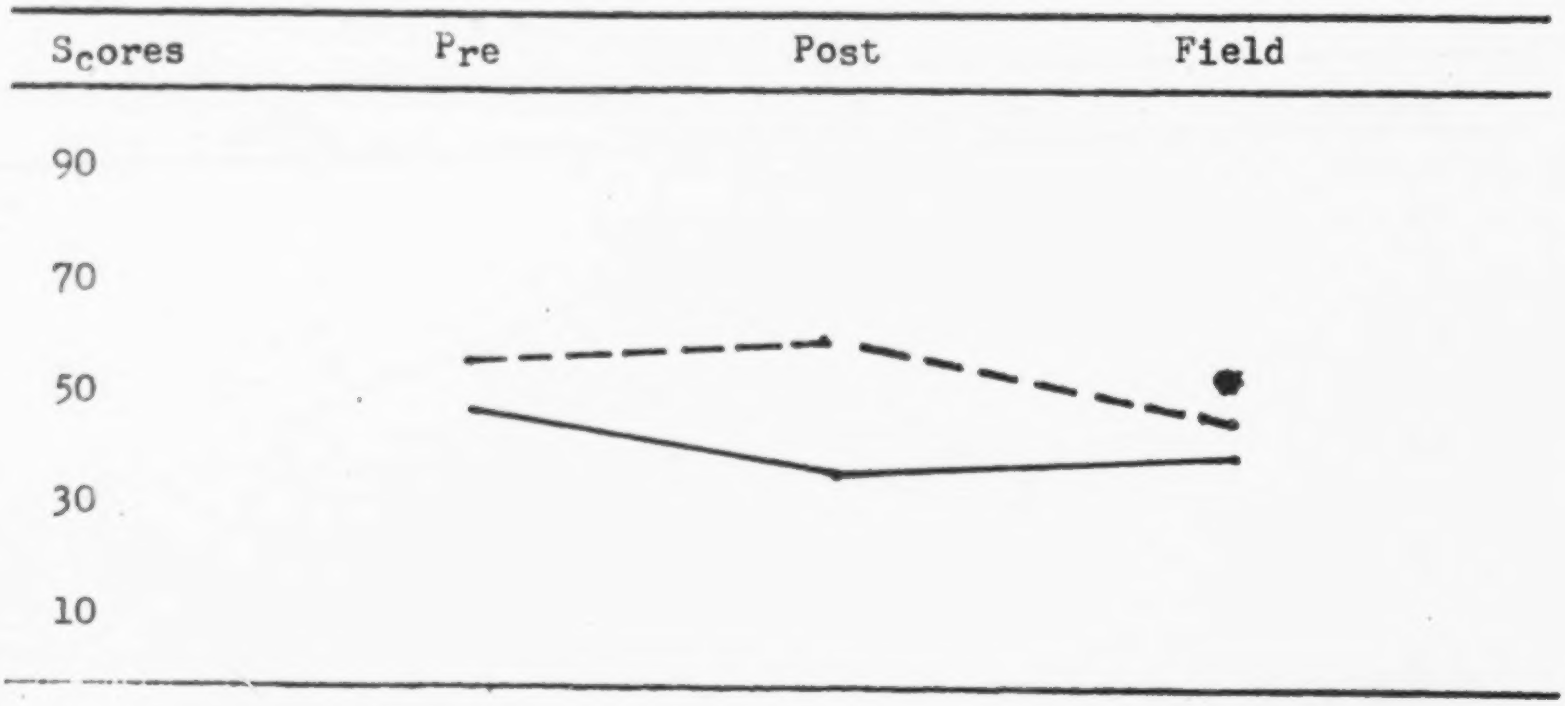

Figure 44

PROPORTION OF DYNAMIC RESPONSES TO TOTAL OBSERVATIONS
EXPERIMENTAL AND CONTROL GROUPS

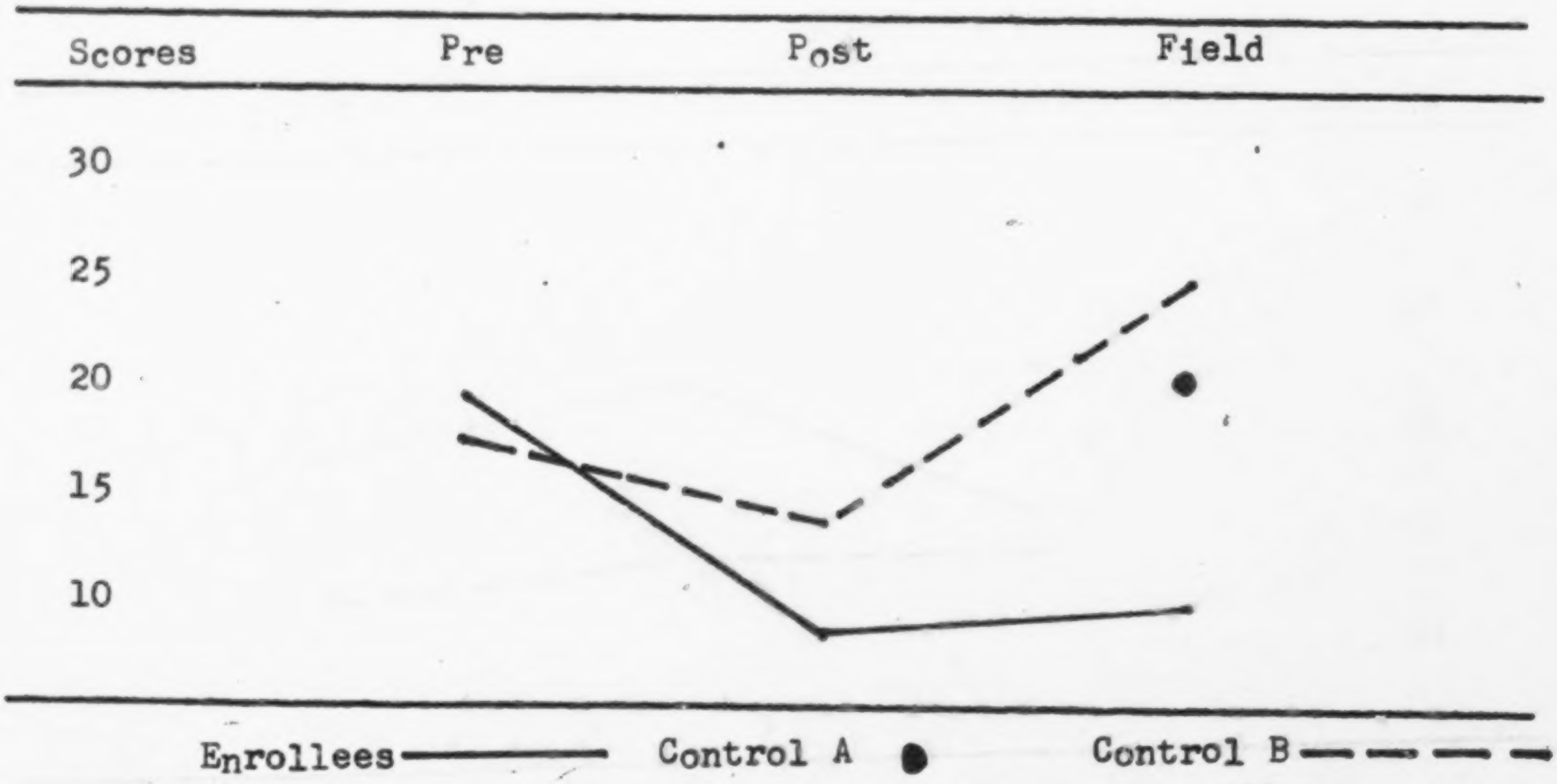

TABLE 3

ANOVA: BEHAVIORAL RATINGS FOR TREATMENT GROUPS ON FIELD DATA

	Category	Experimental Group		Control A		Control B		
		Mean	S. D.	Mean	S. D.	Mean	S. D.	F
	STRUCTURE							
1	Explains Procedures	1.29	1.59	.28	.93	.75	1.83	1.89
2	Identifies targets	5.20	4.09	1.29	2.19	1.65	2.57	6.02xx
3	Establishes rapport	18.23	9.75	15.12	7.13	22.56	11.82	1.20
	ASSESSMENT							
4	Behavioral definitions	21.07	11.05	17.63	10.78	11.93	8.31	1.93
5	Antecedents	5.13	5.39	.12	.42	.45	1.10	6.69xx ?
6	Consequents	3.87	5.06	.40	1.32	.81	1.27	3.45x
7	Reinforcers	3.85	4.64	1.19	2.24	.58	.94	2.94 ?
8	Intervening variables	6.34	6.96	11.30	7.68	18.78	11.00	7.03xx
9	Demographic data	16.30	14.43	34.33	10.62	25.71	5.65	8.13xx
10	Dynamic interpretation	1.21	2.37	3.34	7.28	1.01	1.66	1.20 ?
11	Behavioral interpre.	2.15	2.73	1.06	2.44	3.10	6.36	.79
12	Actions taken	2.12	3.07	1.85	2.48	2.40	2.02	.07
13	Summary	.24	.77	.00	.00	.00	.00	.80
	STRATEGY							
14	Behavioral data	3.84	3.90	.84	1.45	5.18	6.57	3.11 ?
15	Dynamic data	1.76	2.25	5.09	5.25	3.16	3.77	3.91x
16	Non-specific data	.84	1.87	.37	.87	.00	.00	.90 ?
17	Behavioral change	3.53	4.41	2.76	5.29	.75	1.83	1.00 ?
18	Dynamic change	.47	1.08	.71	1.24	.21	.53	.44
19	Non-specific change	1.25	1.69	1.63	3.59	.45	1.10	.54
20	Modeling	.57	2.09	.20	.66	.00	.00	.38
	RATIO COMPOSITES							
21	Struc.: prop. rapport	62.35	26.97	29.66	41.59	20.13	35.58	6.98xx
22	Struc.: prop. behav.resp.	27.22	18.74	6.63	11.02	13.18	26.64	5.51xx
23	Assess.:prop.behav.resp.	57.74	19.80	29.30	17.00	25.86	10.42	14.12xx
24	Assess.:prop.neutr.resp.	29.55	19.39	50.62	14.88	44.35	12.21	6.21xx
25	Assess.:prop.dynam.resp.	12.55	13.02	19.89	12.49	29.60	13.91	4.74xx
26	Strat./Plan.prop.behav.	46.39	32.61	16.59	25.47	25.00	27.38	4.29x
27	Strat./Plan.prop.neutral responses	15.36	17.57	12.95	16.48	5.55	13.59	.84
28	Strat./Plan.:prop.dyn. responses	17.42	21.55	24.96	30.37	36.10	28.69	1.54

CONTINUED next page

TABLE 3 - CONTINUED

Category	Experimental Group		Control A		Control B		
	Mean	S. D.	Mean	S. D.	Mean	S. D.	F
Ratio Composites							
29 Proportion of struc. to total responses	24.79	10.97	16.72	8.46	24.98	11.05	2.51
30 Proportion of assess. responses to total	62.61	11.64	71.43	8.50	65.06	9.33	2.69
31 Proportion of strategy/ planning responses to total	12.40	6.62	11.70	8.41	9.80	6.97	.33
32 Proportion behavioral responses to total	50.83	16.03	25.89	14.51	25.38	10.37	14.77xx
33 Proportion of neutral respons. to total	39.14	15.01	53.42	10.34	51.23	11.78	5.25xx
34 Proportion of dynamic responses to total	9.84	8.43	20.54	10.43	23.25	13.73	7.92xx

? indicates suspected heterogeneity of variance
F for 2 x 42: .05= 3.22 (x), .01 = 5.15 (xx)
F var. (3, 15) .05= 3.54, 01 = 4.90
Control A = passive control
Control B = television group

analyses. Column 5 presents the analyses of variance for the field test data only which has already been presented and discussed in table 3. Column 6 presents the results of an analysis of covariance wherein the covariate was the pre-test and the variate the second video taping. Finally column 7 presents the analysis of covariance results based on the field test data but with the pre-post test scores as the covariate.

Here it is interesting to observe that the significant F ratios in column 6 are much higher than those obtained in column 5. In other words, when the pre-test data was used as the covariate, the F ratios are higher. In these comparisons 8 of 14 F ratios or 57 per cent yielded significant results. Finally, in column 7 the results of the analysis of covariance with pre-post data serving as the covariate and field test data as the variate yield only 3 significant F ratios out of 14 or 18 per cent. An inspection of the means (columns 2, 3, 4) provides some analysis of what this final analysis of covariance implies. It is apparent, for example, that the enrollees tended to make even more structuring responses in the field testing than in their institute second video taping. With regard to assessment responses of a dynamic nature it is apparent that they made a few more of these responses in their field test data than in the second video taping. A similar trend is seen in the proportion of neutral responses to total, and proportion of dynamic responses to total.

These data would suggest that the enrollees for the most part maintained the specific learning skills which they had acquired in the institute after they returned to their home positions in the fall.

TABLE 4

SUMMARY ANALYSIS OF VARIANCE AND COVARIANCE OF GROUPED BEHAVIORAL DATA FOR PRE-POST AND FIELD OBSERVATIONS ON SUMMARY CATEGORIES

	1	2	3	4	5		6		7	
Description of variable	Group	Pre Mean	Post Mean	Field Mean	Field Only Anova F	df	Posttest Only Pre-Covar. F	df	Field Only Pre-Post Coveri. F	df
21. Structure: prop. rapport	Enrol.	14.04	54.90	62.36	-	-	- **	-	-	-
	Con.A.	-	-	29.66	6.98**	42	27.27	35	20.30**	31
	Con.B.	0.0	0.0	6.67	-	-	-	-	-	-
22. Structure: prop. behav. respons.	Enrol.	10.08	34.67	27.22	-	-	- **	-	-	-
	Con.A	-	-	18.74	5.51**	42	19.45	35	.008	31
	Con.B	0.0	0.0	13.30	-	-	-	-	-	-
23. Assessment: prop. behav. respons.	Enrol.	32.36	63.34	57.74	-	-	-	-	-	-
	Con.A	-	-	29.30	14.12**	42	25.00**	35	2.02	31
	Con.B	31.89	28.94	25.06	-	-	-	-	-	-
24. Assessment: prop. neutral respons.	Enrol.	45.18	28.78	29.55	-	-	-	-	-	-
	Con. A	-	-	50.62	6.21**	42	20.47**	35	.08	31
	Con.B	50.60	55.27	43.22	-	-	-	-	-	-
25. Assessment: prop. dynamic respons.	Enrol.	22.89	7.86	12.55	-	-	-	-	-	-
	Con.A	-	-	19.89	4.74*	42	3.46	35	7.89**	31
	Con.B	20.87	16.04	31.54	-	-	-	-	-	-
26. Strat./Planning prop. behav.	Enrol.	16.71	38.99	46.40	-	-	-	-	-	-
	Con.A	-	-	16.59	4.29*	42	.08	35	1.08	31
	Con.B	15.00	33.32	30.00	-	-	-	-	-	-
27. Strat./Plan. prop. neutral	Enrol.	8.51	11.83	15.37	-	-	-	-	-	-
	Con.A	-	-	12.95	.84	42	.005	35	.82	31
	Con. B	6.57	9.51	5.55	-	-	-	-	-	-
28. Strat./Planning: prop. dyn. resp.	Enrol.	9.22	7.76	17.42	-	-	-	-	-	-
	Con.A	-	-	24.96	1.54	42	2.62	35	3.67	31
	Con.B	5.00	20.00	43.32	-	-	-	-	-	-
29. Prop. of struc. to total respon.	Enrol.	11.26	18.42	24.80	-	-	-	-	-	-
	Con.A	-	-	16.72	2.51	42	1.98	35	.28	31
	Con.B	10.82	11.94	21.34	-	-	-	-	-	-
30. Proportion of assess. responses to total	Enrol.	76.54	62.01	62.61	-	-	-	-	-	-
	Con.A	-	-	71.43	2.69	42	4.70*	35	.12	31
	Con.B	81.86	77.02	67.27	-	-	-	-	-	-
31. Proportion of strategy/planning responses to total	Enrol.	8.55	19.42	12.40	-	-	-	-	-	-
	Con.A	-	-	11.70	.33	42	3.57	35	.12	31
	Con.B	7.14	10.90	11.22	-	-	-	-	-	-
32. Proportion behavioral responses to total	Enrol.	33.14	61.70	50.83	-	-	- **	-	-	-
	Con.A	-	-	25.89	14.77**	42	39.52	35	1.39	31
	Con.B	28.96	28.89	25.60	-	-	-	-	-	-

CONTINUED NEXT PAGE

TABLE 4 - continued

Description of variable	1 Group	2 Pre Mean	3 Post Mean	4 Field Mean	5 Field Only Anova F	 df	6 Posttest Only Pre-Covar. F	 df	7 Field Only Pre-Post Covar. F	 df
33. Proportion of netural responses to total	Enrol.	47.59	31.28	39.15	-	-	-	-	-	-
	Con.A	-	-	53.42	5.25**	42	24.55**	35	.20	31
	Con.B	53.60	55.22	48.52	-	-	-	-	-	-
34. Proportion of dynamic responses to total	Enrol.	19.10	6.89	9.84	-	-	-	-	-	-
	Con.A	-	-	20.54	7.29**	42	7.57**	35	7.47*	31
	Con.B	17.30	14.70	25.74	-	-	-	-	-	-
				x	.05 = 3.22*		4.11*		4.15*	
				x	.01 = 5.15**		7.39**		7.50*	

One other study ought to be mentioned here briefly before concluding this chapter. Mrs. Everal Wilde, a graduate student at California State College, Hayward, under the direction of the writer as her advisor, analyzed psychological reports which had been obtained from the enrollees prior to the institute and during the field testing.[2] She analyzed a total of 38 such reports since some of the enrollees did not have both pre and post reports. Her method consisted of evaluating each statement in the report in terms of specificity. For example, she determined whether a statement referred to a global construct in assessment versus a specific antecedent condition. She did the same for structuring, strategy making recommendations, etc. Two hypotheses were stated: 1) that as a result of the institute post psychological reports would contain significantly more specific statements, and 2) that due to institute training, post psychological reports would be more treatment-oriented. Nine content areas were particularly scrutinized. Table 5 represents a composite chi square analysis summary of her findings.

The results of Wilde's study, though based on only 19 pre and post psychological reports analyzed tend to substantiate the other findings of this institute.

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[2] Everal Wilde: Evaluation of the Contents and Usefulness of Selected Psychological Reports, unpublished master's thesis, California State College, Hayward, 1968.

TABLE 5

SUMMARY CHI SQUARE RESULTS OF ANALYSIS OF 19 PRE-POST INSTITUTE PSYCHOLOGICAL REPORTS FOR ENROLLEES

Analysis Category Pre-Post	Chi Square	P
Total Content: Specific vs. Non-Specific	33.33	.01
Treatment Strategies: Specific vs. Non-Specific	23.90	.01
Statement of the Problem: Specific vs. Non-Specific	1.37	NS
Background Information: Specific vs. Non-Specific	4.97	.05
Type of Test Administered: Specific vs. Non-Specific	1.94	NS
Test Interpretation: Specific vs. Non-Specific	14.75	.01
Analyses of Conferences: Specific vs. Non-Specific	.04	NS
Pupil Contacts: Specific vs. Non-Specific	.21	NS
Diagnosis Procedures: Specific vs. Non-Specific	3.64	NS
Alteration of School Variables: Specific vs. Non-Specific	30.14	.01
Alternative Strategies Posed: Specific vs. Non-Specific	.14	NS

Conclusion

This chapter has reported the statistical analyses of variables relating to both cognitive and behavioral change in the institute. The analyses which have been reported confirm positively the questions which were asked both at the beginning of this report and in this chapter. It is concluded that short-term institutes can effect change not only in cognitive awareness, but in measurable dimensions of behavior as manifested in school psychological practice. Further, it is apparent that television exposure in and of itself is not sufficient to effect change in such psychological practice. The key to the use of new media such as television must be in the use of that medium in a specific training program. Finally, the comparison of the several statistical alternatives in data analysis plus the results of the analysis of the psychological reports of enrollees indicate that the changes initiated in behavioral performance in the enrollees as a result of the institute were permanently incorporated into their behavioral repertory - at least up until the conclusion of the field data collection stage in November and December, 1967.

CHAPTER VII

NEXT STEPS AND CONCLUDING REMARKS

This report has described the design, characteristics and pre-post changes on a group of psychologists who were randomly chosen to attend an NDEA Advanced Counseling Institute for School Psychologists at California State College, Hayward during the summer of 1967. The results have suggested that school psychologists, though coming from a variety of backgrounds, with differential theoretical and behavioral approaches to school psychology can be trained to be more effective communicators in the school.

The implications of this study with its emphasis on intensive didactic instruction together with the use of television media to teach specific skills has demonstrated not only that this program met its specified goals, but that other intensive programs could be initiated to train existing education man-power reserves within the United States. Moreover, the development of multiple criteria of performance together with multiple predictors of both cognitive and behavioral nature indicates a direction which could be taken in the planning, initiation and development of such training grants.

The story, however, is not yet complete. For the same enrollees were invited back in the summer of 1968 to work with 75 teachers and other personnel from five school districts. For six weeks these teachers and psychologists in teams worked with 240 educationally handicapped and mentally retarded children. The purpose of this second institute was to determine whether teachers specially trained in some of the same techniques could work with these returning psychologists in increasing the acquisition rate of specific learning skills. Children were tracked systematically for the six weeks of the second institute and the efficiency of psychologist-teacher teams was evaluated. Although final results are still to be analyzed, the purposes of this second institute were 1) to determine whether psychologists trained in the first institute and with a year of added school experience in this model could effect significant increases in the rate of achievement for special education children, and 2) to determine what are the characteristics of the most successful teacher-psychologist teams.

These questions will hopefully be answered in the report of the 1968 institute.

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APPENDIX I

APPLICATION MATERIALS

Department of Counseling and Pupil Personnel, California State College at Hayward; Assistant Professor, Department of Psychology, San Jose State College.

Calvin D. Catterall, Ph.D. Coordinator of Psychological Services, Santa Clara Unified School District, Santa Clara, California; Assistant Professor, Department Counseling and Pupil Personnel, California State College at Hayward.

William P. Garney, Ph.D. Assistant Professor of Psychology, San Jose State College.

In addition to the full-time faculty, a selected number of visiting lecturers and consultants will contribute to the institute.

HOUSING

Housing facilities and meals are available at a college dormitory for single students. For information regarding this housing or for family housing contact the Dean of Men's Office, California State College at Hayward.

NON-DISCRIMINATION

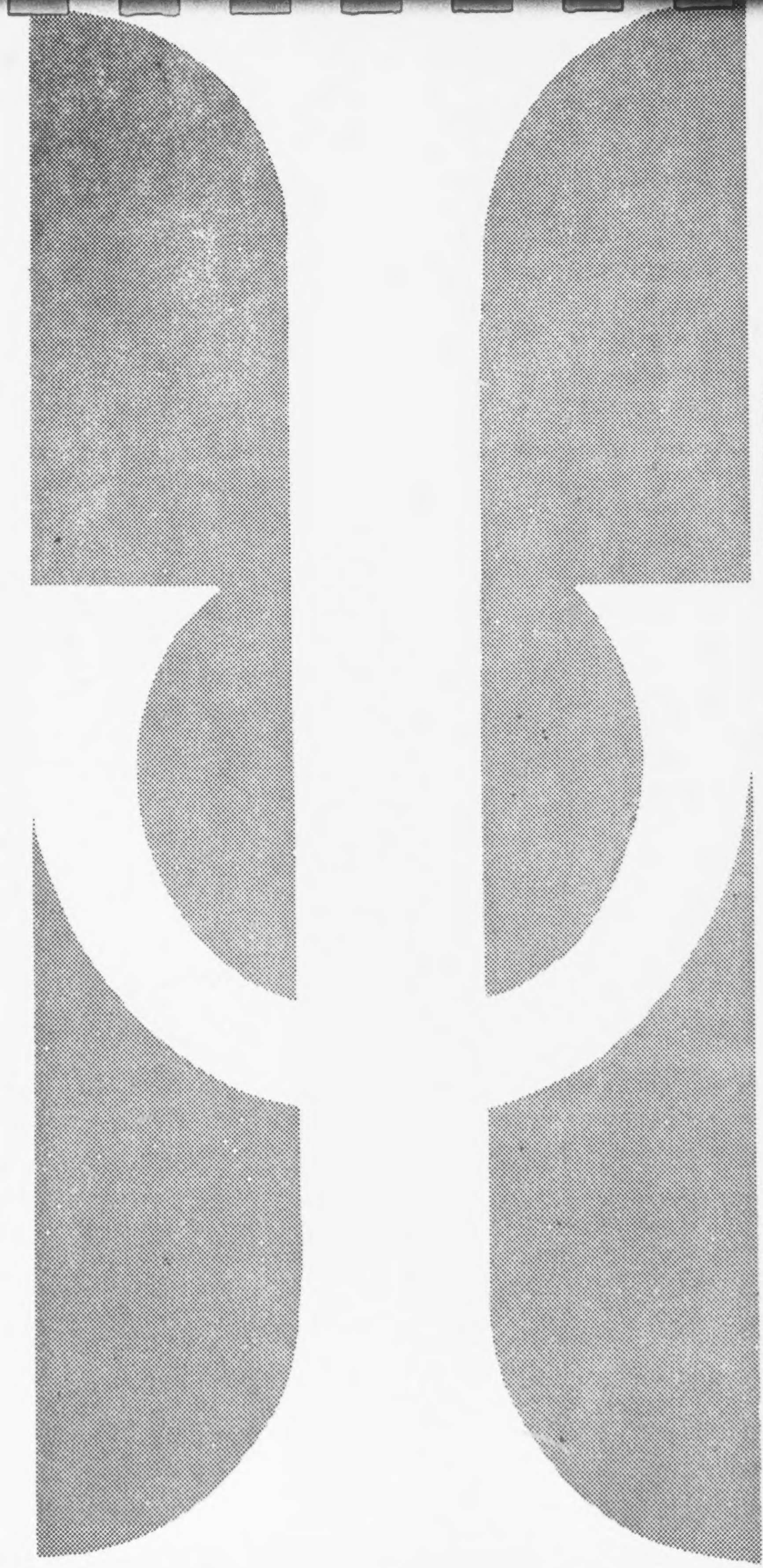
This institute complies with Title VI of the Civil Rights Act of 1964. "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

COMMUNICATIONS

Address all applications and communications regarding the institute to:

Dr. James R. Barclay
Director, N.D.E.A. INSTITUTE
California State College at Hayward
25800 Hillary Street
Hayward, California 94542

REMEMBER – ALL APPLICATIONS AND SUPPORTING DOCUMENTS MUST BE POSTMARKED APRIL 3, OR EARLIER.



CALIFORNIA STATE COLLEGE AT HAYWARD
25800 Hillary Street
Hayward, California 94542

June 19 to August 11, 1967

N. D. E. A. INSTITUTE FOR ADVANCED TRAINING IN COUNSELING AND GUIDANCE

SCHOOL PSYCHOLOGY

New Concepts

Strategies

Implementation

Methods

Conducted by

California State College at Hayward

under a supporting grant from the
U.S. Office of Education
Department of Health, Education & Welfare,
Division of Educational Personnel Training

through the auspices of the
National Defense Education Act as amended
Title V (B).

California State College at Hayward announces a summer institute in advanced training for school psychologists to be held under the auspices of the National Defense Education Act as amended Title V (B) from June 19 to August 11, 1967. This institute is supported under a grant from the U.S. Office of Education, Department of Health, Education and Welfare. This institute is planned as the first of a sequence of two summer institutes for the same participants. Funding has been granted for the first of these two institutes, but the second is dependent on a similar grant and is not guaranteed at this time.

OBJECTIVES

The purpose of this institute is to provide functioning school psychologists with advanced training in procedures and techniques designed to promote more communication with school personnel. Three special aspects of the institute are:

1. The assessment of the school as an agent of cultural transmission,
2. The development of skills in consultation and collaborations relating to the resolution of learning and/or problem behavior in in the classroom, and
3. The learning of new treatment strategies through the use of video tape television procedures.

CRITERIA OF ELIGIBILITY

1. Participants shall possess a master's degree or equivalent from an accredited college or university. This degree or course work shall be in the specific fields of psychology, counseling, or a closely related field in which the major emphasis is unquestionably psychologically-oriented.

2. Participants shall hold a certificate or credential qualifying them as a psychometrist or school psychologist. In states where such credentialing or certification is not required, other evidence may be requested.

3. The participants shall be currently employed as a psychometrist, school psychologist or equivalent.* At least part of their full-time work must be spent in psychological work with elementary school children and teachers. Verification of employment will be required.

4. Participants will be asked to make a tentative committment to attend both institutes. Preference will be given to those applicants who indicate that they will plan to attend the institute of 1968 if awarded.

*Elementary Counselors who qualify as psychometrists may be eligible.

ADMISSION PROCEDURES

Applicants meeting the criteria of eligibility are invited to write to the Director of the Institute, Dr. James R. Barclay. Application materials and instructions for their completion will be sent to the applicant by return mail. Selection of participants will be based on the following guidelines:

1. Verification of criteria of eligibility.
2. Receipt of all application data and recommendations.
3. Receipt of official transcripts of all undergraduate and graduate work completed to date.
4. Willingness to participant in two continuing institutes (1967 and 1968).
5. Evaluation of professional qualifications and potential for profiting from the institutes.

All application materials, recommendations and transcripts remain the property of the Institute and cannot be returned. The deadline for receipt of all application materials, transcripts and recommendations is April 3, 1967. Participants will be notified on or about April 17, 1967, and letters of acceptance from participants must be postmarked not later than April 30, 1967.

NUMBER OF PARTICIPANTS AND FINANCIAL SUPPORT

Thirty (30) qualified participants will be recruited and enrolled. Participants from public and private non-profit schools and institutions of higher education pay no tuition and receive stipends of $75.00 per week plus $15.00 for each dependent. Stipends will be paid bi-monthly beginning on June 20th, 1967. No travel or housing allowances are included.

INSTRUCTIONAL PROGRAM

The institute at California State College at Hayward will be a full-time summer program of eight weeks consisting of specified course work, seminars, laboratory experiences, and the contribution of special lecturers and consultants. The emphasis in the 1967 institute will be on strategies of communication and remediation for school behavior problems related to environmental learning. The emphasis in the 1968 institute will be related to learning difficulties associated with structural defects in children.

Twelve units of graduate credit (quarter hours) will be earned by participants.

Counseling 6902 SOCIAL-BEHAVIORAL LEARNING 3 Credits

A consideration of current research relating to cultural transmission in reference to principles of social learning.

Counseling 6903 THE APPRAISAL OF SOCIAL INTERACTION 3 Credits

The appraisal of variables such as motivation, need achievement, personality constructs and the evolution of vocational decision-making in relationship to demographic influences.

Counseling 6904 SEMINAR IN SCHOOL PSYCHOLOGY 2 Credits

Seminar approach to the practice of school psychology including evaluation of differential treatment procedures, consultation, use of new video media, and the role of the school psychologist in research.

Counseling 6905 PRACTICUM IN SOCIAL-BEHAVIORAL LEARNING TECHNIQUES 4 Credits

An intensive study of new techniques in school psychology utilizing appropriate field experiences and television training procedures.

MAJOR FACULTY

DIRECTOR

James R. Barclay, Ph.D. Professor, Coordinator School Psychology Program, Department of Counseling and Pupil Personnel, California State College at Hayward.

ASSOCIATE DIRECTOR

Dwight L. Goodwin, Ph.D. Assistant Professor,

N. D. E. A. INSTITUTE
California State College at Hayward
25800 Hillary Street
Hayward, California 94542

Dr. James R. Barclay, Director
Dr. Dwight Goodwin, Associate Director

March 6, 1967

Dear

Thank you for your inquiry regarding the N. D. E. A. Institute to be held at California State College at Hayward this summer. We are sending you the first of two packets of application materials for the institute. This packet includes necessary Governmental forms and institute forms relating to eligibility requirements. The second packet which you should receive shortly will relate to the planning and curriculum needs of the institute itself.

Included in the present materials are:

1. U. S. Governmental forms
   OE 4401 Application for Admission
   OE 4402 Applicant Record Card
   OE 4403 Confidential Evaluation Form (2 copies)

2. Institute forms
   Job Analysis Inventory
   Time Distribution Inventory
   Personal Statement Form

Please read the directions on each form carefully. Complete all forms using a typewriter or printing legibly. Follow the steps listed below to check that you return everything needed to us.

1. Complete U. S. Government Forms directly.

2. Deliver the two confidential evaluation forms (OE 4403) to:
   A. Your immediate supervisor
   B. A professional source or acquaintance
   C. Prepare an air-mail stamped envelope with the director's address on it and give it to your two recommenders. Urge them to complete the forms and mail them immediately.

3. Complete the three institute forms.

4. Return to us a copy of your complete undergraduate and graduate transcripts. Note. Most likely you have transcripts in your possession. Have a copy Xeroxed and send them directly to us. In the event that you are chosen as an applicant you will be asked to obtain official transcripts. Time is so short that we will not ask for official transcripts now and if you have no official copies and are forced to request college sources for these transcripts, please urge them to hasten to send them on.

OE 4401

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

BUDGET BUREAU NO. 51-R322.5
APPROVAL EXPIRES 12-31-68

APPLICATION FOR ADMISSION
TO AN NDEA INSTITUTE, ARTS & HUMANITIES INSTITUTE, OR EXPERIENCED TEACHER FELLOWSHIP PROGRAM

Type or print in block letters your answers to this form. Submit this form, together with an Applicant Record Card (OE 4402) and any other forms supplied by the institution to which you apply, to the Institute or Program Director, NOT to the U.S. Office of Education.

1. Your name (*Title, first, middle initial, last*):

Institution: CALIF. STATE COLL. AT HAYWARD
Subject Field: COUNSELING AND GUIDANCE

2. Home address (*Number, street, city, state, ZIP code*):

4. Sex: ☐ MALE ☐ FEMALE

5. Age: ______ YRS.

6. U.S. Citizen: ☐ YES ☐ NO

7. Social Security No. ☐☐☐ ☐☐ ☐☐☐☐

8. Marital status: ☐ SINGLE ☐ WIDOWED ☐ MARRIED ☐ DIVORCED

3. Home telephone:
AREA CODE: __________ PHONE: ____________________

9. Number of dependents (*excluding yourself*) who are claimable for Federal income tax purposes: ________
(If you file a joint return and are NOT the major earner, you may not claim any dependents.)

10. Your present employment (*check one*):

☐ I AM EMPLOYED IN A SCHOOL, SYSTEM, OR COLLEGE.
(Complete the remaining items on this form.)

☐ I AM NOT EMPLOYED IN A SCHOOL, SYSTEM, OR COLLEGE.
(Omit items 11 through 18 and specify your employment here):
____

11. Name and address of school:

17. Name, title, and address of your immediate supervisor:

12. School telephone:
AREA CODE: __________ PHONE: ____________________

18. List your present schedule of courses taught, professional assignments, etc.

COURSES TAUGHT OR ASSIGNMENTS	GRADES	PERIODS PER WEEK

13. Level of school (or system):

☐ PRE-SCHOOL
☐ ELEMENTARY
☐ JUNIOR HIGH
☐ SENIOR HIGH
☐ JR-SR HIGH
☐ ELEMENTARY & SECONDARY
☐ JUNIOR COLLEGE
☐ TECHNICAL INSTITUTE
☐ COLLEGE OR UNIVERSITY

14. Type of school (or system):

☐ PUBLIC
☐ PRIVATE, CHURCH-RELATED
☐ PRIVATE, NOT CHURCH-RELATED

15. Number of students enrolled (*if you serve a single school*):
____

19. If you are preparing for employment at a different school or level, or for a different assignment, specify here:

16. Title of your position:

(over)

20. Summarize your years of experience in teaching or related work:

SUBJECTS OR ASSIGNMENTS	LEVEL (ELEM., SECONDARY, ETC.)	YEARS OF EXPERIENCE	SUBJECTS OR ASSIGNMENTS	LEVEL (ELEM., SECONDARY, ETC.)	YEARS OF EXPERIENCE

21. Employment Record -- List your places of employment in teaching or related work during the last 5 years. *(Start with your present or last position and work back.)*

DATES	NAME AND ADDRESS OF EMPLOYER	NATURE OF YOUR DUTIES

22. What colleges and universities have you attended? *(Exclude attendance at institutes or programs you list in item 23.)*

NAME OF INSTITUTION	DATES ATTENDED	DEGREE	MAJOR	MINOR(S)

23. Have you previously attended an NDEA Institute, an Arts & Humanities Institute, or an Experienced Teacher Fellowship Program? ☐ YES ☐ NO ***(If yes, specify each.)***

NAME OF SPONSORING INSTITUTION	DATES ATTENDED	SUBJECT FIELD	NAME OF INSTITUTE OR PROGRAM DIRECTOR

24. Describe any other significant academic experiences you have had in the subject field of this institute or program *(such as summer programs, workshops, or seminars):*

26. Does your present employment involve the teaching of special classes for physically or mentally handicapped children and youth, or the supervision or administration of such special classes? ☐ YES ☐ NO

IF YES, INDICATE WHETHER THE SCHOOL IS:

☐ EXCLUSIVELY OR PRIMARILY FOR THE HANDICAPPED, OR

☐ ONLY INCIDENTALLY FOR THE HANDICAPPED

25. What teaching certificates or other credentials do you hold? *(Indicate type, level, subjects, etc.)*

27. Are you applying for Institutes or Fellowships in addition to this one?

☐ YES ☐ NO ***(If yes, specify them.)***

INSTITUTION	SUBJECT FIELD

28. I CERTIFY that the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

DATE:

SIGNATURE OF APPLICANT:

U. S. GOVERNMENT PRINTING OFFICE : 1966 O - 240-977

OE 4403

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

BUDGET BUREAU NO. 51-R596
APPROVAL EXPIRES 12-31-68

CONFIDENTIAL EVALUATION FORM

NDEA Institutes for Advanced Study; Arts and Humanities Institutes

(Name of applicant):

Name of sponsoring institution and field of study:

CALIF. STATE COLL. AT HAYWARD

COUNSELING AND GUIDANCE

I am seeking admission to an NDEA Institute for Advanced Study (or to an Arts & Humanities Institute).

The Selection Committee for the Institute named above has requested that I forward this Confidential Evaluation Form to my principal, department chairman, or immediate supervisor. Please complete the form and return it to the Institute Director.

1. Name of evaluator:

Title of position:

School *(or system)*:

2. How long have you known the applicant and in what capacity?

3. Considering all the teachers *(or specialists)* you have worked with or supervised, how would you rank the applicant on the following characteristics?

Characteristics	Excellent	Above Average	Average	Below Average	Poor	Can't Judge
a. Ability as a teacher *(or specialist)*						
b. Knowledge of subject matter						
c. Effectiveness in working with students						
d. Effectiveness in working with colleagues						
e. Leadership potential						
f. Scholastic ability; capacity for growth						

4. Please provide any comments on the applicant's ability, performance, character, temperament, etc., which you believe will aid the Selection Committee in determining his or her suitability for this Institute.

5. In what ways do you believe that the applicant would benefit from attending this Institute? *(If the applicant has specific areas of need, please indicate them.)*

6. Does the applicant have a contract, or the offer of a contract, in your school or school system for next year?

☐ Yes ☐ No ☐ I don't know ***(If not, please explain.)***

7. Please comment on ways in which your school or school system may utilize or benefit from the training received by the applicant if he or she is selected for the Institute.

8. Signature of evaluator:

Date:

U. S. GOVERNMENT PRINTING OFFICE : 1966 O - 240-978

4403

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

BUDGET BUREAU NO. 51-R596
APPROVAL EXPIRES 12-31-68

CONFIDENTIAL EVALUATION FORM

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Name of sponsoring institution
and field of study:

CALIF. STATE COLL. AT HAYWA
COUNSELING AND GUIDANCE

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Characteristics	Excellent	Above Average	Average	Below Average	Poor	Can't Judge
a. Ability as a teacher *(or specialist)*						
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5. In what ways do you believe that the applicant would benefit from attending this Institute? *(If the applicant has specific areas of need, please indicate them.)*

6. Does the applicant have a contract, or the offer of a contract, in your school or school system for next year?

☐ Yes ☐ No ☐ I don't know *(If not, please explain.)*

7. Please comment on ways in which your school or school system may utilize or benefit from the training received by the applicant if he or she is selected for the Institute.

8. Signature of evaluator:

Date:

U. S. GOVERNMENT PRINTING OFFICE : 1966 O - 240-978

TIME ANALYSIS STUDY

EXPLANATION: School psychologists spend their time in a variety of ways which differ in terms of the demands placed upon them by school districts and their own ability to fulfill these demands. Please have your secretary consult your calendar and fill in the following form.

FOR THE MONTH OF FEBRUARY 1967 Frequency Tally

1. Number of Referrals Received ________
2. Number of Referrals this year to date (March 1, 1967) ________
3. Number of Cases Tested (total, February 1967) ________
   A. For Special Education Purposes ________
   B. For Discipline or Behavior Problems ________
   C. For Other Special Purposes (Specify) ________
4. Number of Reports Written (Total, February 1967) ________
5. Individual Counseling Sessions with Children ________
6. Group Counseling Sessionswith Children ________
7. Conferences with Teachers ________
8. Conferences with Principals ________
9. Conferences with Administrators ________
10. Conferences with Guidance Personnel (counselor, school nurse, speech correctionist, etc.) ________
11. Conferences with Special Education Personnel ________
12. Conferences with Curriculum Consultants ________
13. Conferences with Parents ________
14. Conferences with Outside Agencies ________
15. Conferences with Consultants ________
16. Conferences with Child ________
17. Conferences with Others (Specify)________________ ________
18. Attendance at Professional Organizations ________
19. In-service Education Contributions by Contacts (summarize Frequency) Specify________________ ________
20. Research Activities by Contacts (summarize frequency) Specify Title________________ ________
(Local, State Supported, Federal)

APPLICANT'S PERSONAL STATEMENT

EXPLANATION: For purposes of reviewing your application for this institute and the one following it, please indicate succinctly your responses to these questions. Please type your answers.

1. What do you consider to be the primary goals of your school psychological practice at present?

2. How successful have you been in moving toward these goals in the last two years, and on what basis do you judge movement?

3. Within realistic limits how do you relate this institute to your personal goals in school psychological practice?

4. In what areas do you feel some deficiency? What particular skills or learnings would benefit you?

N. D. E. A. INSTITUTE

CALIFORNIA STATE COLLEGE AT HAYWARD

SCHOOL PSYCHOLOGY JOB ANALYSIS INVENTORY.

EXPLANATION The following questionnaire supplements the regular U. S. Government forms by providing information relating to the eligibility requirements of this particular institute. Please check the appropriate categories.

NAME ______________________ DATE ____________ 20. AGE ______

22. School Address ______________________

23. Number of years experience as
(1) school psychologist ______
(2) school psychometrist ______
(3) elementary counselor ______
(4) teacher, elementary ______
teacher secondary ______
(5) special education ______
(6) secondary counselor ______
(7) administrator ______
(8) other specify
______________ ______

24. Title of Position ______________________
(1) Full-time ___ (2) Part-time ___ (1/2 or less)

25. If part-time check the appropriate category for describing the balance of your time

(1) student ___
(2) teaching ___
(3) research ___
(4) private practice ___
(5) clinical affiliation ___
(6) other (specify)
______________ ___

26. Check the level or levels serviced by you:

(1) kindergarten ___
(2) elementary ___
(3) junior high ___
(4) senior high ___
(5) special ed. ___
(6) other (specify) ___
______________ ___

27. Check the following personnel serving in your school system: (Do not include yourself)

(1) counselors and guidance workers ___
(2) psychiatrists ___
(3) clinical psychologists ___
(4) remedial reading specialists ___
(5) school doctors
(6) school nurses ___
(7) school psychologists ___
(8) school psychometrists ___
(9) school social workers ___
(10) speech correctionists ___
(11) hearing therapists ___
(12) other (specify)
______________ ___

28. Check the community population:

(1) under 5000 ______
(2) 5000 - 10,000 ______
(3) 10000 - 25,000 ______
(4) 25,000 - 50,000 ___
(5) 50,000 - 100,000 ___
(6) Over 100,000 ___

29. List years of clinical experience (other than in school setting)

(1) child guidance clinics ____
(2) hospital ____
(3) private practice ___
(4) other(specify)
______________ ___

30. Have you had an internship placement? (1) yes ______ (2) no. ______

31. If yes, check appropriate categories.

(1) 2-3 mos.____ (2) 3-6 mos.____ (3) 6-9 mos.____ (4) 9-12 mos.____

2. Does your state provide a teaching credential or certificate for school psychology or psychometry? (1) yes ______ (2) no ______

3. Check the credentials you hold:

(1) elementary teaching____
(2) secondary teaching ____
(3) school psychometry ____
(4) school psychology ____
(5) school social work ____
(6) school counseling ____
(7) special ed.____
(8) administration____
(9) other(specify)
__________ ____

34. Does your state provide licensure or certification for psychological practice?
(1) yes ____ (2) no ____

35. Are you certificated or licensed as a psychologist in your state?
(1) yes ____ (2) no ____

36. Check the following professional organizations which you hold membership in.
(1) American Psychological Association____
(2) Division 16 A.P.A. ____
(3) A State Psychological Association____
(4) A State School Psychology Assn. ____
(5) American Personnel & Guid. Assn.____
(6) A State Personnel & Guid. Assn.____
(7) A teacher organization ____
(8) American Educational Research Assn.__
(9) A State Educational Research Assoc.__
(10) Other(specify)
__________________ ____

37. What was your undergraduate major?______________________

38. What was your overall undergraduate grade-point average? (Compute A= 4, B = 3, C = 2, D = 1) __________

41. How many graduate courses have you taken in preparation for your school psychology work? __________

43. What was your overall graduate grade-point average (Compute A = 4, B = 3, C = 2, D = 1)

46. Check the following courses which you have had in your preparation for school psychology.
(1) General Psychology ____
(2) Experimental Psych ____
(3) Child Psychology ____
(4) Learning or Adv. Ed. Psychology ____
(5) Physiological ____
(6) Motivation ____
(7) Personality ____
(8) Abnormal ____
(9) Social ____

47.
(10) Educational Found.____
(11) Methods & Curricu.____
(12) Administration ____
(13) Philoso.&Hist.Ed. ____
(14) Tests & Measure.____
(15) Individual Test.____
(16) Projective Test.____
(17) Counseling Theory____
(18) Statistics elemen.____

48.
(19) Adv.Statis.____
(20) Clini.Psych.____
(21) Excep.Child____
(22) Learning Dif.____
(23) Remedial Ed.____
(24) Practicum in Counseling____
(25) Practicum in Testing ____
(26) Internship ____

49. List any publications, papers read and the title of your thesis if you have a Master's degree. Append extra page if necessary.

Thesis ______________________________

____

____

N. D. E. A. INSTITUTE
California State College at Hayward
25800 Hillary Street
Hayward, California, 94542

Dr. James R. Barclay, Director
Dr. Dwight Goodwin, Assoc. Director

April 6, 1967

Dear Applicant:

This letter is to inform you that your application is one of 100 applications from which the final selection of participants in the School Psychology Institute will be made. Over 2,000 letters were received requesting information about the Institute. Some 800 packets of application materials were sent out.

As a result of the overwhelming interest in this Institute, the number of qualified and eligible applicants is far in excess of the thirty positions which we can award. As a result, we have proposed to the U. S. Office of Education that the final selection be made on the basis of a stratified random choice. This means that your application will be grouped with others from your geographic section of the nation and a random selection of participants made. The total number of returned applications will be assigned to various geographical areas of the nation and the percentage of applications from each section determined. Hence, for example, if 10 per cent of the applications were received from the states of Michigan, Wisconsin, Illinois, Iowa and Ohio, 10 per cent of the participants in the Institute will be chosen from that group. In this way, it is our hope that a national representation will be found in the Institute.

Meanwhile we are sending to you a packet of materials which are indispensable for the planning of curriculum and evaluation procedures in the institute. Though these materials will not be utilized in any way as a screening device, they are urgently needed. It is essential for us to identify major trends in school psychology practice and to obtain some important pre-Institute information about your current function as a school psychologist.

The materials relate to your theoretical orientation in the practice of school psychology and your evaluation of specific practices. In addition we are requesting that you ask three teachers to complete a brief form relating to their evaluation and appraisal of specific practices in school psychology as they view them.

PLEASE COMPLETE THE MATERIALS AS SOON AS POSSIBLE AND RETURN THEM IN THE ENVELOPE PROVIDED. WE WILL NEED THESE MATERIALS ON OR BEFORE APRIL 17, 1967.

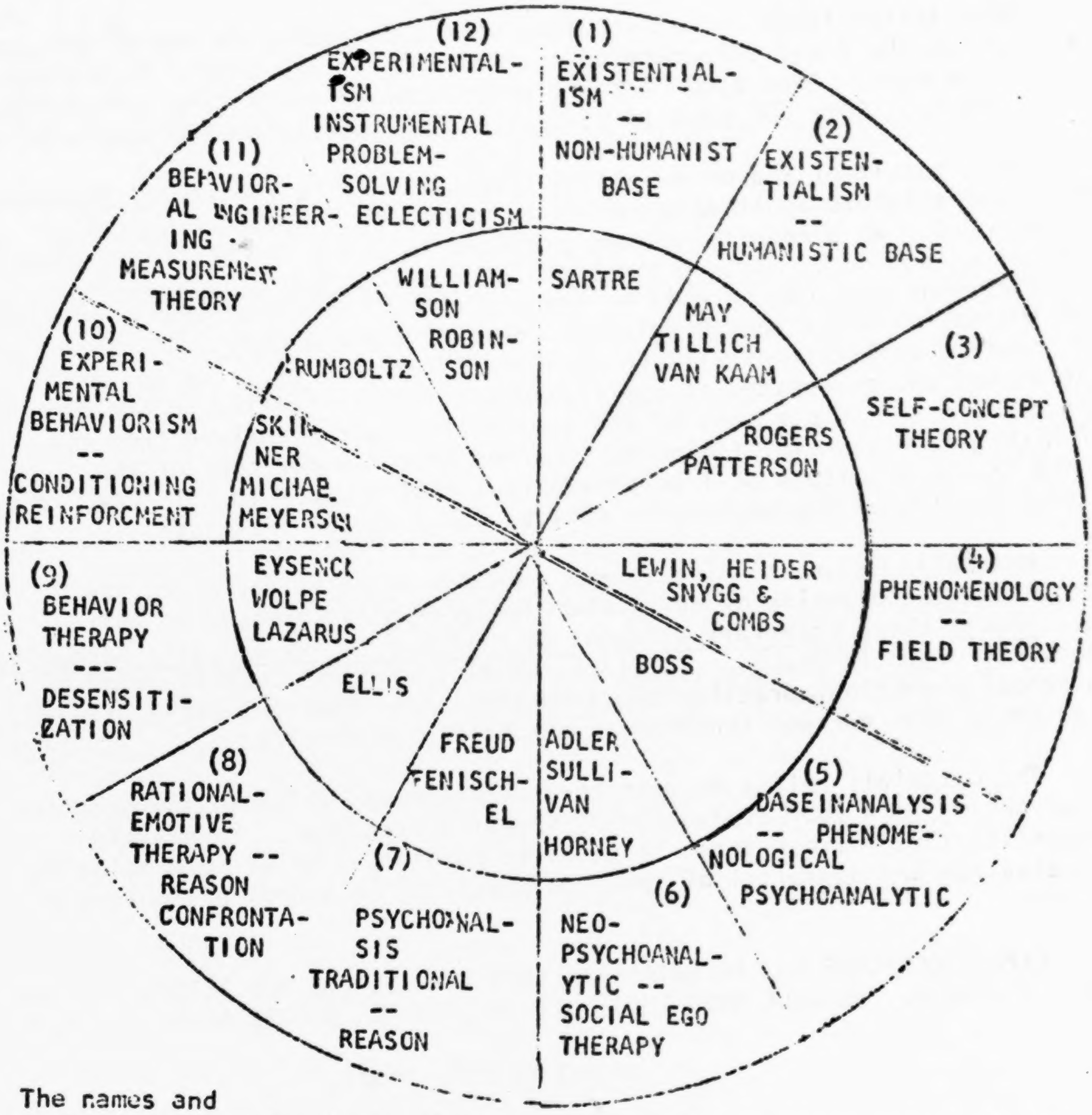
Sincerely yours,

James R. Barclay
JAMES R. BARCLAY, Ph. D.,
Director.

JRB:jj
Enclosures

THEORETICAL ORIENTATION

EXPLANATION: Psychological theory as applied to school psychology tends to have a basis in one or more differential approaches. Below is an arrangement of current psychological frames of reference which have influenced the thinking of many school psychologists. Insofar as you are able to determine your own position would you fill out the accompanying questionnaire specifying your preferences for these frameworks.


(1)
EXISTENTIAL-ISM -- NON-HUMANIST BASE
(2)
EXISTENTIALISM -- HUMANISTIC BASE
(3)
SELF-CONCEPT THEORY
(4)
PHENOMENOLOGY -- FIELD THEORY
(5)
DASEINANALYSIS -- PHENOMENOLOGICAL PSYCHOANALYTIC
(6)
NEO-PSYCHOANALYTIC -- SOCIAL EGO THERAPY
(7)
PSYCHOANALYSIS TRADITIONAL -- REASON
(8)
RATIONAL-EMOTIVE THERAPY -- REASON CONFRONTATION
(9)
BEHAVIOR THERAPY --- DESENSITIZATION
(10)
EXPERIMENTAL BEHAVIORISM -- CONDITIONING REINFORCMENT
(11)
BEHAVIORAL ENGINEERING - MEASUREMENT THEORY
(12)
EXPERIMENTALISM INSTRUMENTAL PROBLEM-SOLVING ECLECTICISM
SARTRE
MAY
TILLICH
VAN KAAM
ROGERS
PATTERSON
LEWIN, HEIDER
SNYGG & COMBS
BOSS
ADLER
SULLIVAN
HORNEY
FREUD
FENISCHEL
ELLIS
EYSENCK
WOLPE
LAZARUS
SKINNER
MICHAEL
MEYERSON
KRUMBOLTZ
WILLIAMSON
ROBINSON

NOTE: The names and authorities mentioned are simply representative of these points of view. There are many others who have not been included.

THEORETICAL ORIENTATION QUESTIONNAIRE

Please examine the dimensions on the previous page and indicate your preferences by placing the code numbers of the positions you feel most closely aligned to in the boxes on the right.

EXAMPLE:

If your orientation were Neo-psychoanalytic, Rational Emotive, Behavioral Engineering you would fill in the following code.

6	8	11

Now, please examine the figures and indicate your preferences.

1. Please refer to the figure and characterize your present theoretical orientation in relationship to the dimensions presented. In the corner of each position is a number. Place the number (s) of the positions you feel most closely aligned to in the boxes to the right.

1st	2nd	3rd

2. How would you characterize your theoretical position (s) at the completion of your graduate training?

1st	2nd	3rd

3. Have you changed your orientation?

YES	NO

4. If so how have you changed?

	1st	FROM 2nd	3rd

		TO	

5. Please think of three professors who influenced you in your preparation for school psychology. Identify their department, subject and characterize their orientation insofar as you can remember.

	Department	Subject	ORIENTATION CODE NO.
A.			
B.			
C.			

6. Of your colleagues in school psychology, either in the same district or surrounding districts, characterize their predominant orientation. Use one, two, or three codes.

1st	2nd	3rd

(T.O.Q.)

SCHOOL PSYCHOLOGICAL PRACTICE QUESTIONNAIRE

EXPLANATION: In your practice of school psychology you have encountered a number of behaviors and have used a number of techniques and instruments. This inventory is an attempt to determine your evaluation of some of the problems which you have observed, some of the instruments you have found useful, and some of the techniques which you have used. IN SHORT WE ARE ASKING YOU TO DETERMINE PRIORITIES REGARDING GOALS, PROCEDURES, AND TECHNIQUES. ASSUME EACH OF THE SUGGESTED ALTERNATIVES ARE APPROPRIATE.

1. Rank the following procedures in accordance with your experience in searching for relevant information and their comparative efficacy.

   A. The early psycho-sexual history of the child. ________ 1

   B. The child's self-report and feelings about himself. ________ 2

   C. The direct antecedents and consequences of his behavior. ________ 3

   D. The cumulative record and teacher report. ________ 4

2. In evaluating the results of your function in the school rank the following as criteria of effectiveness.

   A. Number of referrals tested, reports written and results communicated. ________ 5

   B. Favorable comments received from teachers and parents. ________ 6

   C. Personal self-report from student. ________ 7

   D. Observed improvement in frequency of adaptive behavior as noted by independent observers ________ 8

3. In coping with a child who manifests continued acting-out disruptive behavior in the classroom setting, rank the following procedures in relationship to your experience of their success in cases you have treated.

   A. Referral to a specific clinical facility for treatment of child and parents. ________ 9

   B. Provision of a more structured environment, systematic exclusion when necessary, coupled with positive reinforcement scheduling. ________ 10

   C. Developing a person or group as a means to inducing positive identification, such as a surrogate mother or peer tutor. ________ 11

   D. Providing personal on-going transactions focusing on ego development devices such as role playing, play therapy, model building, etc. ________ 12

4. Rank the following procedures in accordance with your experience in searching for relevant information and their comparative efficacy.

   A. Systematic observation of the child's behavior in several school settings. ________ 13

   B. Visiting the home and parents of the child. ________ 14

   C. An initial testing session. ________ 15

   D. An initial counseling session. ________ 16

5. Consider the case of an acting-out junior high school student who is involved in delinquent behavior out of school, and disrupts the classroom. Your individual testing results on the WISC confirm essentially normal intelligence, i. e. Performance I. Q. of 107 and Verbal I. Q. of 94. Rank the following classifications in your order of preference.

   A. Sociopathic personality, immature ego development. ________ 17

   B. Maladaptive social behavior with deficient internal controls. ________ 18

   C. Unresolved conflict relating to poor self-concept. ________ 19

   D. Immature adolescent with identification problems. ________ 20

6. In your initial effort to treat the child mentioned in No. 5 rank the following procedures.

   A. Provide an appropriate adult identification through empathy and sharing of common experiences. ________ 21

   B. Attempt to explore the student's perception of himself in relationship to his family interactions, early childhood experiences, peer relations, etc. ________ 22

   C. Exploration of the specific behaviors which have occasioned his problem and the sources of reinforcement which have supported the behavior. ________ 23

   D. Confront the student with the possible alternative consequences of his behavior in relationship to appropriate school and social goals. ________ 24

7. Rank the following group procedures in terms of their meaningfulness to you as a school psychologist.

A. A classroom sociometric test. ________ 25

B. A classroom personality inventory or check-list. ________ 26

C. A classroom achievement or intelligence test. ________ 27

D. The free-art expressions of a class. ________ 28

8. A fourth grade child of normal intelligence has developed an aversion to school reaction of phobic dimensions accompanied by enuresis and frequent episodes of crying. In your initial meeting with the parents to help effect a resolution of this problem rank the following procedures in accordance with your personal approach.

A. Help the parents clarify their feelings about the child through the provision of a supportive setting. ________ 29

B. Help the parents to recognize their need for treatment in a family therapy center. ________ 30

C. Explore the early psycho-sexual development of the child and that of other members of the family. ________ 31

D. Explore parental and sibling responses relating to the onset and continuation of the child's undesired behavior. ________ 32

9. Rank the following individually administered testing procedures in terms of your estimate of their worth to your practice.

A. A word-association or sentence-completion test. ________ 33

B. An adjective check-list or problem inventory list. ________ 34

C. A self-concept Q sort. ________ 35

D. A semantic differential ________ 36

10. In evaluating the results of your function in the school rank the following as criteria of effectiveness.

A. Favorable comments from supervisors and administrators. ________ 37

B. Student improvement through increased learning application as indicated on achievement tests. ________ 38

C. Student improvement through greater peer acceptance as measured by peer ratings. ________ 39

D. Request from teachers for in-service training in personality dynamics and symptoms of pathology. ________ 40

11. As you search for cues relating to the causal factors in a child's acting out behavior, rank the following in accord with your experience as sources explaining his behavior.

A. The child's interpersonal relationships. ________ 41

B. The identification of primary defense mechanisms. ________ 42

C. Group achievement and intelligence test results. ________ 43

D. Existing model identification. ________ 44

12. Rank the following procedures in terms of your general approach to effecting change in the behavior of a child.

A. Development of self-understanding and consequent modification of overt social behavior. ________ 45

B. Development of more appropriate social behavior and consequent reorganization of self-understanding ________ 46

C. The modified use of testing information for inducing changes in overt social behavior. ________ 47

D. The modified use of testing information for developing self-understanding. ________ 48

13. In the case of a shy, nervous child of normal intelligence who has few friends and cannot be induced to respond to the teacher in the class, rank the following descriptive categories according to your preference in terminology.

A. Poor self-concept related to lack of insight. ________ 49

B. Neurotic syndrome with inability to express hostility. ________ 50

C. Social behavioral learning deficit. ________ 51

D. Intra and inter-personal adjustment conflict. ________ 52

14. A teacher of a first grade class asks you what she might do to promote mental health in the classroom. Rank the following suggestions you might give her.

A. Provide an opportunity for the children to express their feelings openly and freely in a **quasi**-group counseling session once or twice a week. ________ 53

B. Provide outlets for unresolved aggression and hostility through finger-painting, clay work, class plays and other media once or twice a week. ________ 54

C. Provide a current-events period or two per week in which token verbal and real rewards are administered for socially directed behavior. ________ 55

D. Provide a period or two per week for children to consider alternative solutions to problems they have in school, home, etc. ________ 56

CONCEPT CHECKLIST

EXPLANATION: In order to determine areas of common interest and familiarity, you are requested to rate the following terms according to their usefulness to your practice. You are not expected to be familiar with all of the terms in the same degree and your preferences should be expressed in your ratings.

1. Highly useful.
2. Fairly useful.
3. Seldom useful.
4. Not relevant.

After you have completed your ratings place a circle around the five terms which you feel are most important to you as you approach the diagnosis of human behavior in a child.

____1.Repression
____2.Reciprocal inhibition
____3.Transparency
____4.Parataxic Distortion
____5.Catharsis
____6.Libido
____7.Cathexis
____8.Contingency
____9.Extinction
____10.Masculine Protest
____11.Transaction
____12.Fixation
____13.Neurosis
____14.Phobic Reaction
____15.Sublimation
____16.Unconscious
____17.Self-Concept

____18. Valence
____19. Lebenswelt
____20. Variable Ratio
____21. Organizers
____22. Subsumption Process
____23. Desensitization
____24. Chaining
____25. Empathy
____26. Compulsion
____27. Abreaction
____28. Driven Behavior
____29. Transference
____30. Projection
____31. Rationalization
____32. Psychoneurosis
____33. Rejection
____34. Aversive stimulus

____35. Counter conditioning
____36. Counter transference
____37. Reaction formation
____38. Insight
____39. Token Economy
____40. Modeling
____41. Maladaptive Overlay
____42. Intentionality
____43. Inferiority Complex
____44. Collective Unconscious
____45. Persona
____46. Stroking
____47. Behavior Deficit
____48. Sanguine
____49 .Criterion Approximation
____50. Operant Conditioning
____51. Shaping

PSYCHOLOGICAL PRACTICES INVENTORY

Dear Colleague:

We are conducting an NDEA Institute for school psychologists and psychometrists. We wish to evaluate the effectiveness of the institute and would appreciate your help in describing the present role of the school psychologist in your district.

On the following pages we have collected a list of services which may be provided by school psychologists. Some of these services may not be available in your district.

We would like you to complete this questionnaire in the following manner. First complete column I according to how frequently the services seem to be performed. Then proceed to column II indicating what you feel the priority should be.

COLUMN I	COLUMN II
According to how frequently they are actually performed (Use the following scale)	According to what your order of priority would be if conditions were ideal (Use the following scale)
a. frequently	1. high priority
b. occasional	2. medium priority
c. seldom	3. low priority
d. never	4. not appropriate

SERVICES TO THE INDIVIDUAL STUDENT

	Col.I	Col. II
1. Attempt to identify causes of the child's learning difficulty.		
2. Begin new cases in the order in which they have been referred.		
3. Gather information regarding the child.		
4. Carefully interpret test results to the teacher.		
5. Inform teacher of students in their class who have been identified as experiencing learning difficulties.		
6. Arrange to see teacher periodically during the case study.		
7. Make concrete suggestions for action in helping children in the classroom.		
8. Refer child to community agencies.		
9. Periodically re-evaluate previously referred children.		
10. Plan several conferences following completion of the psychological work.		
11. Follow-up cases to see if remediation or counseling has generalized to other areas.		
12. The result of psychological evaluation is a planned course of action.		

SERVICES TO THE SCHOOL AS A WHOLE

	COL. I	COL. II
1. Conduct institutes and in-service training for school personnel.		
2. Assist in the evaluation of curriculum.		
3. Aid in developing new curriculum.		
4. Aid special education teachers.		
5. Screen for readiness at K and 1st grade levels.		
6. Make known those services that are and are not available in the district.		
7. Inform teachers of new developments in teaching methods.		
8. Supply teaching materials as a resource person to facilitate instructional goals.		
9. Schedule a definite portion of the day to be available for informal contact with the staff.		
10. Help school personnel to resolve personal problems.		
11. Train teachers to administer and interpret selected group and individual tests.		
12. Write reports so that they can be kept in the cumulative record of the child.		
13. Use terminology which is readily understood by school personnel.		
14. Participate in selection of instructional materials and the design of the physical plant.		
15. Maintain personal contact with each teacher and administrator.		
16. Keeps psychological reports separate from the cumulative record but available to school staff.		

SCHOOL

RESEARCH

	COL. I	COL. II
1. Participate in some research activity.		
2. Encourage and facilitate research activities by school personnel.		
3. Assist curriculum groups to evaluate new and ongoing school programs.		
4. Keep school personnel abreast of research having practical application to the school situation.		
5. Identify areas for further research.		
6. Relay research findings to school personnel.		

SERVICES TO THE COMMUNITY

	COL. I	COL. II
1. Participate in community activities.		
2. Inform the community of the nature and function of his services.		
3. Counsel groups of parents.		
4. Serve as a public relations figure between the school and the community.		
5. Participate in community mental health activities.		